DOCUMENT RESUME

ED 083 148 SP 006 911

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TITLE	Current Research and Development Efforts in Inservice Training and Curriculum Planning for Teacher Education.
SPONS AGENCY	Bureau of Educational Personnel Development (DHEW/OE), Washington, D.C. Div. of Assessment and Coordination.
PUB DATE	[71]
NOTE	161p.
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	*Curriculum Development; Educational Development; Educational Research; *Evaluation; *Inservice Teacher Education; *Performance Based Teacher Education; Teacher Certification; Teacher Role; *Training Techniques

ABSTRACT

The need for and purpose of in-service training, including some goals and weaknesses in the teaching profession are presented. Teacher training models, in-service programs for teachers of disadvantaged and economically deprived children, the relationship of innovations to technology, the changing roles of teachers, performance-based teacher certification, and the role of evaluation are discussed. (Portions of the bibliography may be illegible.) (Editor)

ED 083148

CURRENT RESEARCH AND DEVELOPMENT EFFORTS

IN

INSERVICE TRAINING

AND

CURRICULUM PLANNING

FOR

TEACHER EDUCATION

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CURRENT TRENDS AND INNOVATIONS IN INSERVICE EDUCATION FOR TEACHERS

I. INTRODUCTION

> In this day of specialization, we in the elementary school have almost lost sight of a very important fact: a qualified elementary classroom teacher is, in his own right, a specialist in elementary education. This statement is sometimes applied, often ignored, and frequently denied.[1]

In light of the foregoing we realize that today's teachers are faced with the challenge to prepare children to live in an unpredictable world; a world that has a constantly changing culture. There is a need for teachers to be critical, yes, but also to be able to accept change. Yet, it is not possible for a teacher to be interested in change if he has no knowledge of its potential.

In order to update professional knowledge and teaching strategies, continual inservice education is essential. Inservice education is that segment of education used to promote professional growth and development. Inservice education is not the cure for all that is lacking in present day instruction, but it does recognize the fact that the teacher is the basic factor for improved instruction.

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1. Elizabeth J. Baisclair, Teaching Mathematics in in the Elementary School, What's Needed? What's Happening, NEA Publications (1970), p. 47.

Programs for inservice education need to stimulate and provide means for self-evaluation of teacher effectiveness; to change patterns and methods of learning experience; to focus on pupil learning; to utilize inquiry teaching techniques; to make use of educational resources, and to improve teacher-child relationships.

II. NEED AND PURPOSE OF INSERVICE TRAINING

In order to meet the crucial need to update teachers professionally, and to have in every classroom a teacher with a broad educational background, a depth of preparation in special areas, and a zeal for continued learning, dynamic inservice programs are essential. No longer can lectures themselves fill this need. Teachers are bored with courses that do not relate to themselves or to what they are teaching. There is a dire necessity to establish workable programs where credit and monetary compensation as the sole end are pushed to the background, and real learning experiences are achieved.

A. WEAKNESSES IN THE TEACHING PROFESSION

Evidence shows that some teachers are teaching with the same proficiency they had as student teachers. Using these outdated methods and competencies deteriorate teacher ratings. Insufficient teacher preparation and teachers who lack full certification are still other weaknesses to be considered.

Those who do not find fulfillment in their work definitely need more dynamic educational programs of continuous learning. These programs could include meetings,

workshops, and conferences which would be pertinent to individual interests.

In his article, The Dead Faculty Member, Arthur Evans states:

> Like everyone else, teachers seek personal fulfillment, and their behavior will be deeply affected by the degree of adequacy they feel they have a chance to achieve. [2.]

Administrators, therefore, have an obligation to create an environment for faculty growth and development. Teachers, too, have an obligation as their own professional leaders, to set their own goals and to work to improve their own teaching. The drive to become an effective teacher comes from within. This drive can be fed and nourished by outside influences, but it first must be enkindled by the individual teacher. Teachers must work continually so that boredom and frustration are not caused by work which has become routine.

The need for a radical change in education must be capitalized on so that it becomes an integral part of educational structure. There is a need to meet the functional needs of society and individual students. Because of poor planning and lack of criteria, change has too frequently been short-lived. Many times innovations are initiated in schools without concomitant teacher education programs, and the results are usually unfavorable. Therefore, it is imperative to study goals and perspective before initiating change.

The teacher who has no knowledge of change or its potential cannot be interested in it. If past experience

2. Arthur Evans, Jr., The Dead Faculty Member: Prevention and Cure, Paper (1969).

has not prepared a teacher for successful use of a new curriculum, additional training is a necessity. Fear of risk-taking is often the cause for reluctance to change, and thereby the potential to succeed is lost. When the new seeks to replace the old, many times the burden of proof falls on the old. In an effort to keep pace with new demands in education, and the accelerated needs of today's youth, it is imperative that outmoded curricula be altered and new ideas implemented in our school systems.

In many instances this will demand an attitudinal change on the part of many experienced teachers. For even though some teachers are familiar with innovative systems and materials and are influenced by new trends, the great majority lag behind and are frightened by the volume and rapidity of change.

Teachers have a tremendous responsibility. It is their responsibility to assume the role of guide, stimulator, listener, questioner, and inspirer. At all times they must be a source of encouragement to the students as they help them to explore man's environment. As managers of the learning process, it is the teacher's job to show genuine concern for children and to be personally involved in their progress.

An adequate background of knowledge, experience, human growth and development, the psychology of learning, a sincere desire for personal growth, and an awareness for the necessity of continued learning are the desired qualifications for the classroom teacher.

Most teachers display a definite desire to improve

their professional background. They are interested in the innovative materials, but need training in the use of them.

Relevant periodic retraining is imperative in order that teachers keep abreast of advances in curricula, methodology, media, and strategies.

B. INSERVICE GOALS

Inservice education, of necessity, must seek to eliminate deficiencies in the preparation of teachers. It must serve as refresher courses to those returning to the teaching profession after a prolonged absence. It must be concerned not only with curricular changes, but also with changes in approach and total learning conditions. Inservice programs should then encompass these goals:

1. Increase the effectiveness of all teachers, trainers, and trainees
2. Develop the interpersonal growth of teachers
3. Provide means for self-evaluation
4. Change patterns and methods of directing learning experiences
5. Improve utilization of educational resources
6. Improve teacher-child relationships
7. Provide opportunities for discussion and sharing of ideas
8. Provide adequate feedback about the effectiveness of their teaching
9. Provide opportunities for continuous growth and to extend competencies.

10. Assist practicing teachers to become more proficient in the use of media

11. Obtain maximum impact by reaching entire staff of a school

12. Involve teachers in the planning and implementation of inservice courses

13. Provide atmosphere which facilitates growth and change

14. Involve teachers and teacher groups in research and experimentation.

In order to achieve these goals many activities can be used to stimulate inservice growth. Academic study continues to be important and opportunities for this type of personal growth are offered in extension courses, summer school sessions, and correspondence courses. In addition to academic study, opportunities for a more varied type of activities to serve the needs, abilities, and interests of individual teachers must be made available. These may be in the form of:

1. Institutes held either during the school year or during the summer. These provide opportunities to listen, but more important, an exchange of ideas takes place during discussions.

2. Workshops constitute an informal atmosphere which gives impetus to discussion and exchange which strive to solve problems of individual teachers.

3. Staff meetings are important in that they are a means of acquainting staff members with policies and routine. These also serve as opportunities to discuss school problems and progress.

4. Visits and demonstrations are an excellent means to provide constructive help. These should not be limited to one building, but opportunities for exchange between systems

and buildings should be made available.

5. Field trips which include a guide or instructor, and which are preceded and followed by discussion periods.

6. Cultural experiences which enrich the teacher's life, and thereby effect a change in his teaching.

7. Organized group study

8. Individualized professional study

In a research summary, Marsha A. Ream tells us:

> The inservice education of teachers includes all formal and informal activities that aid the teacher in discharging his responsibilities. Inservice education should not invariably consist of summer school or university courses; many other activities may contribute to personal and professional improvement. The more varied the possibilities open to the teacher, the more likely it is that he will be attracted by some of them and find activities that suit his particular needs. To individualize the inservice education of teachers may be just as important as to individualize the teaching of children. [3]

It is possible, then, to reduce frustrations and fears in teacher innovation by providing dynamic inservice opportunities for them. These opportunities must be based on the assumption that problems are solved and situations changed by starting where you are. Change must begin at the teacher level of schools if education

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3. Marsha A. Ream, National Education Association, Research Division. Inservice Education of Teachers, Research Summary 1966-S1. Washington, D.C.: Government Printing Office (1966), p. 11.

is to change in a meaningful way. "Participation by teachers in the decisions which effect their lives is essential if they are to grow." [4]

III. CURRENT RESEARCH AND EFFORTS BEING MADE IN INSERVICE TRAINING

A. TEACHER TRAINING MODELS

The traditional concept of student teaching as the end experience to train student teachers is no longer adequate. Educational needs have evolved at a more rapid pace than has teacher preparation. Because no one point of view is best in teacher education, it is the writer's intention to explore many avenues of approach that will effect continual inservice training and professional upgrading, and to show that inservice training is an integral and regular part of every teacher's professional responsibility.

Preservice training rarely equips a teacher for life, and the aim of inservice training should be directed to the improvement of his performance. Thus, teacher education need not take the form of a set of courses or acquisition of skills and facts. Rather, it should come as a set of experiences which will open his mind, enlarge his spirit, and challenge the powers of his entire personality.

In an effort to broaden the student teacher's experience several Elementary Teacher Training Models have been established. These models seek to provide

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4. Glenn C. Boerrigter, Elementary Teacher Training Models. Introduction. Washington, D. C.: U. S. Department of Health, Education, and Welfare (September, 1969), p. 2.

extensive cooperation "between the teacher training organization and other campus components as well as local schools, private industry, and State Departments of Education." [5]

Dean Corrigan states:

> An extraordinarily important realization emerges from the notion of continuing education to keep up with rapid changes in all aspects of life. That is that no one will ever "complete" an education. We have had the concept of continuing education around for a long time, but in former years this meant that an individual had responsibility to continue his personal development on his own. In the future he must find a formal educational structure available to him. Education must prepare him to take advantage of new opportunities as well as help him to face the insecurities of the changing society promised him as a way of life. Sixty million jobs will change in character in the next generation. ... Skills will obsolesce and facts will wear out at a more rapid pace. What can be most worth learning will mainly be the knack of learning itself. [6]

1. THE UNIVERSITY OF TOLEDO MODEL PROGRAM

The University of Toledo Model Program was begun on the belief that "existing programs of teacher

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5. _____ Final Report, Ad Hoc National Committee on Training Complexes, Training Complex Project Administrative Center. Massachusetts: Clark University (July, 1970), p.118.

6. Dean Corrigan, Elementary Teacher Training Models, Personnel Development: What's Ahead? Washington, D.C.: U. S. Department of Health, Education, and Welfare (Sept. 1969), p. 7.

education were not adequate to prepare future teachers for the changing conditions in American Schools."[7] In agreement with Don Davies of USOE, George Dickson lists the following changing conditions:

1. Moving from a mass approach to an individual approach in education.

2. Moving from an emphasis on memorizing to an emphasis on learning how to think, how to learn, as well as an emphasis on the non-cognitive, non-intellectual components of life.

3. Moving from a concept of a school isolated from the community to a concept of a school that is in and of the community.

4. Moving from a fear of technology to utilizing machinery and technology for educational purposes.

5. Moving from a negative to a positive attitude toward children who are different.

6. Moving from a provincial perspective of the world and education to a multi-cultural perspective.

7. Moving from a system characterized by academic snobbery to one which recognizes and nurtures a wide variety of talents and fields.

8. Moving from a system based on serving time to one which emphasizes performance.[8]

Very early in the program the idea of teacher preparation for a self-contained classroom was abandoned, and the concept of a multi-unit school and team teaching was developed. The basic training of teachers will be through a multi-activity type program which will com-

7. George E. Dickson, Ibid, p. 16.
8. Ibid, p. 16.

bine "work and study, practicum and experience, and content and training." [9] This training will not be stilted by sole reliance on college course work or limited experience. There will be considerable involvement of the public school system as the physical foundation for actual experience. A continuous cooperative and coordinated effort will exist between training colleges or universities and public schools.

Instead of a four year college course, the length of time any candidate remains in a training program will depend on his capacity and ability to meet program demands. He will continue to participate in a program of continuing teacher education after his entry into the teaching profession.

2. FLORIDA STATE UNIVERSITY MODEL PROGRAM

Florida State University has outlined a three phase program to develop teacher training behaviors.

1. An underclass phase concentrates mainly on general education.

2. The preservice phas usually begins with the junior year and places emphasis on professional preparation.

3. The inservice phase begins with the awarding of bachelor's degree and extends two school years and three summers. The culminating point is the awarding of a master's degree and full professional certification. During the academic year trainees will be employed as teachers, but will spend their summers on campus, with a portion of each summer spent in preparation for the upcoming teaching assignment. The aim of the summer sessions is to extend, in a guided manner, the trainees'

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9. Ibid, p. 20.

competence in psychological, sociological, and philosophical areas. Seminars will be conducted to assist the trainees to become professionally responsible teachers. Opportunities to pursue an appropriate area of specialization will be made available to them.

In order to prepare for the level of competency that will be needed by the teacher of 1973, three specializations are provided in the program.

1. Age group - the nature of training experience will be based on the choice of age group (early childhood or later childhood) made by the trainee.

2. Academic subjects - all trainees will be exposed to a reasonable knowledge of all curricula areas, but will select one for specialized study.

3. Differentiated teaching functions - each trainee will be knowledgeable of such roles as programmer, media specialists, and content resource teacher.

In the area of specialization, seminars will be designed to clarify the demands of selected specialization.

Portal schools will mark the transition between preservice and inservice phases of training. They will serve as stepping stones into the teaching profession. Of necessity these schools will be chosen because of the administrator's and staff's inclination to change, and willingness to participate in the variety of ways the model teaching program must include.

In initiating and continuing this program of

teacher education, the University will assume the major role with the public school system for the planning of the program. However, it is not the intention of the University to dictate the nature of the program, but rather to be more cooperative. To accomplish this end the University is prepared to provide an appropriate share of human and financial resources.

3. MASSACHUSETTS MODEL ELEMENTARY TEACHER EDUCATION PROGRAM

This model program is "an attempt to institutionalize change through a thorough analysis of educational roles, tasks, structures, and objectives." [10] This program has been based on the following conditions:

1. changing role of teachers
2. performance criteria
3. content knowledge
4. human relations skills
5. specialist-generalist
6. differential staffing
7. multiple strategy
8. diagnosis and evaluation
9. program alternatives
10. post-graduate follow-up

In the belief that a teacher's training must be an on-going situation, a closely knit relationship between preservice and inservice training is developed. The graduate, as well as the other teachers in the area, is free to make use of the technological and human resources of the Institute.

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10. Dwight W. Allen, James M. Cooper, Ibid. Massachusetts Model Elementary Teacher Education Program, p. 31.

4. THE MICHIGAN STATE MODEL

"The Behavioral Science Elementary Teacher Education Program (BSTEP) is a comprehensive program based on the content and modes of inquiry of the behavioral sc sciences." [11.]

This program is designed to achieve three major objectives, ie, (1) a well educated, human and responsible teacher; (2) to establish research and clinical experiences as a basis for continued educational improvement; (3) and a new kind of laboratory to establish undergraduate and inservice educational programs.

In this program clinical experiences are designed to develop and expand teaching facility. In successive intensity students experience working with children and faculty. This occurs in five phases: tutorial, career-decision seminars, analytical study of teaching, teamed teaching, and internship. There is constant supervision and feedback designed to assist the student. Thus, the elementary schools become the setting for preservice and inservice teacher development through the combined efforts of universities and school systems.

5. NORTHWEST REGIONAL EDUCATIONAL LABORATORY - A COMPETENCY BASED, PERSONALIZED AND FIELD-CENTERED MODEL OF AN ELEMENTARY TEACHER EDUCATION PROGRAM

The Com-Field model is embodied in four distinct features. Demonstration of competence in the performance of teaching is the basis for certification. To insure that the teacher education program pursued by every

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11. John E. Ivey, Jr., and W. Robert Houston, Ibid, The Michigan State Model Program, p. 36

student is relevant to him, development of procedure is required. A definite partnership with the schools in designing and carrying out the program and a new form of management system that will support the demands of the program are also required.

With the implementation of this program it is hoped that the prospective teachers will themselves become independent, self-directed, continuing learners, and will be able to create a refreshing learning experience for the children they teach.

6. THE UNIVERSITY OF PITTSBURGH MODEL OF TEACHER TRAINING FOR THE INDIVIDUALIZATION OF INSTRUCTION

Using individualized instruction as a central theme, it is hoped that this model will have great significance in implementing this type of instruction. In this program emphasis is placed on flexibility, self-development, mastery of learning goals, and efficiency in adjusting to individual knowledge, learning styles, and interests. Specific requirements of this model are academic and professional education, teacher competencies, a clinical setting, and a guidance component.

For the establishment of a clinical setting cooperation among university, school district, professional organization and government agencies must be established.

For the first two years of training academic education is the dominant theme; the final two years focus on professional education, competencies, and self-

development through guidance. During this time the trainee assumes the role of assistant, teacher, student teacher, and intern.

7. THE SYRACUSE UNIVERSITY MODEL FOR THE PRESERVICE AND INSERVICE EDUCATION OF ELEMENTARY SCHOOL TEACHERS

In an ever changing world no one can be sure of the form our future will take. There is, therefore, a great need for a teacher education program that will be continually self-renewing as it assumes a major role in shaping the changes that seem certain in the future world of education. To accommodate this ever changing world, teacher education programs must include continuing in-service education. It is the objective of the Syracuse Model to encompass the above need in providing a program that recognizes and accommodates unique differences in fostering the development of self-directed, self-renewing programs.

Based on a five year program, two and one half years are given to liberal studies. The remainder of the junior year provides the student with a pre-professional introduction to the field of teaching where he learns a series of professional skills and knowledge which will be the foundation for full time professional skills and practices. These skills and practices will be used during the senior year and fifth year which is referred to as the resident year. It is hoped that during the senior year the student will have decided upon a specialized area, and that he will have developed the skills and knowledge necessary to function as an elementary teacher.

In the fifth year the student would pursue a specialization program during the summers preceding and following the school year. He will engage in half-time teaching at a resident center, and a full year partnership. In a partnership two resident students share classroom responsibilities and each receives one half of the salary of a beginning teacher.

The resident center is described as a cluster of two or three geographically contiguous schools, administered by a coordinator who was jointly selected by all partners in the center. Public school systems, teacher educational institutions, professional associations, and state departments of education make up the partnership.

In addition to updating teacher training and providing continuing inservice education, this Syracuse program involves public school personnel in teacher education and university personnel in curriculum development in the schools.

8. COLUMBIA UNIVERSITY MODEL PROGRAM

This program began with the recognition that the final solution to educational problems does not exist. Focus for this Teacher-Innovator program is centered upon training teachers to inquire and to develop new and more effective processes and strategies. By so doing it is hoped to develop a teacher who will have total commitment to an on-going innovative professional life. Continuous scholarship will renew and enforce his teaching competencies.

This program can be divided into four phases. In phase one, school life is studied and analyzed by candidates. In phase two, the student practices and experi-

ments with methods and strategies in small group situations. In phase three, students study experimental teams at work in a school. In the final phase, they practice techniques they have learned and continue teaching experiments during summer or after regular school hours.

9. THE UNIVERSITY OF GEORGIA MODEL PROGRAM

The University of Georgia Model Program proposed to develop a model of elementary teacher education which will produce teachers able to achieve optimum effectiveness in the teaching world. In this model five kinds of laboratory facilities are needed:

1. General Resource Laboratory which includes all facilities used by the students
2. Instructional Unit Central Resource Laboratories for materials and equipment
3. Instructional Unit Field Laboratories
4. Clinics
5. Instructional Unit Interaction Laboratories

More on the job laboratory experience is provided in this model than was used in the traditional training of teachers. The student has two six week periods of para-professional work with children, three six week periods of semi-professional work, and a ten week period of internship.

The school practicum program enables students to spend several weeks in observation and participation in classrooms before the opening of the college fall quarter. This provides a practical base for curriculum and methods classes. Six class hours of semester work at the beginning of the quarter augment this program. Frequent use is made of micro-teaching and video-taping to provide

after conference feedback and evaluation of teaching performance.

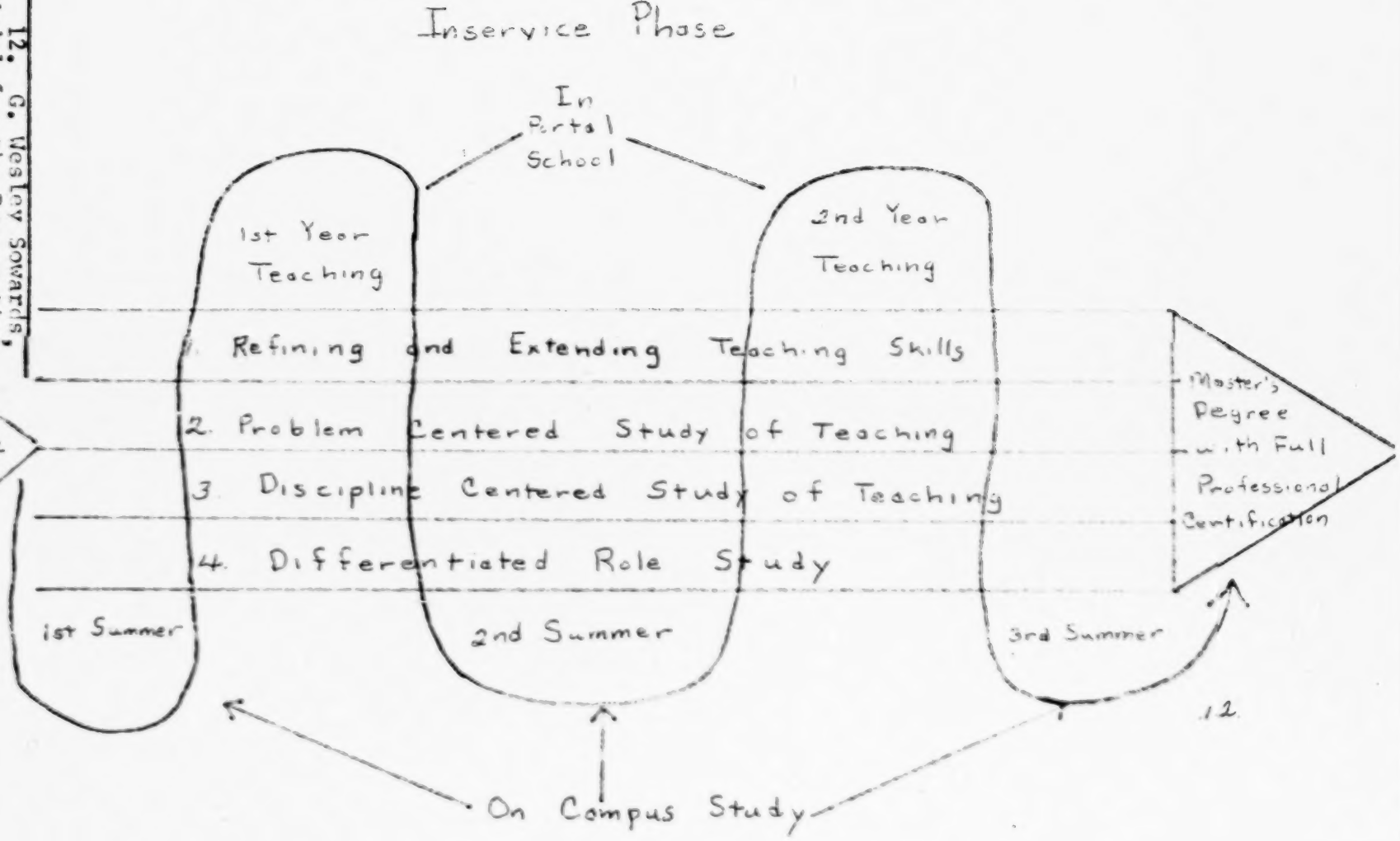
Incorporated in this program is a Work-Study Program which enables a student to achieve full time employment status and pay as teacher aide during one quarter of the sophomore and junior years. After school hours students participate in classes utilizing the work experiences they have had. Instructors of these courses work with teachers as resource persons through visitations and conferences.

Page twenty of this paper gives a picture of a typical inservice phase of the Model Programs. Variations of this model occur within different Institutions.

In addition to the nine programs outlined above, other universities are currently making innovations in their teacher training programs. Most school systems have changed their outlook on internships. In the early 60's this was considered an imposition, but now more and more systems are regarding internship as a professional opportunity and responsibility. Integration of the intern with the total professional education program relates theory and methodology to actual classroom practice. Experience as a member of a teaching teams allows him to interact with inservice teachers.

At Concordia Teacher's College in River Forest, Illinois, a cooperative program to strengthen rapport between the college department of teacher education and the off campus student teaching center has been inaugurated. Included in this program are orientation sessions for new cooperative teachers, handbooks and supplementary materials, dinner meetings involving various groups of related personnel, a one week summer Institute, weekly

12. G. Wesley Sowards, A Model for the Preparation of Elementary School Teachers Washington, D.C.: Dept. U.S. Dept. Health, Education,



This diagram gives a clear picture of a typical Inservice phase of the Model Program Variations of this model occur within different Institutions

visits by college supervisors, college assistance with staffing needs of cooperating centers, and leave of absence programs to enable outstanding teachers to join the college staff as college supervisors for one year.

In Wilmette, Illinois, eighty first year teachers from the suburban district participated in an inservice program. An individualized program for each teacher was developed cooperatively by the teacher and one or more staff members. A five day summer workshop was directed to the orientation of the teachers. During the school year teachers were released one half day per month for workshops, visitation, demonstration teaching, and consultation. On eight Saturday mornings they attended workshops dealing with curriculum problems, teaching methods, and instructional materials. Each participant is teamed with an experienced helping teacher who assists with planning, observation, and self-evaluation. Frequent use of video-tape for self-evaluation is made. An advisor consultant from the staff of a nearby university is also assigned to each participant. Plans are in progress to extend this program throughout the teacher's pretenure period.

In Maryland four years were devoted to the development and implementation of the teacher education concept. This produced one of the most promising innovations in teacher education.

The role of the public school was emphasized in the preservice program. The Center, a place where professional educators are committed to the growth of prospective teachers, makes it possible for the college to increase its role in the development and execution of inservice programs. A student is assigned to a center

designed for his professional growth. Therefore, each member of the center should contribute to the professional growth of the student.

The program offers a variety of experiences to the student. Numerous teaching models are presented, and he is encouraged to experiment with many ideas. In this manner he is able to develop his own style of teaching. He attends grade level meetings, either as an active participant, or as a listener, eager to learn from others more experienced than he is.

As the year progresses, the student is given more and greater involvement with the children. Out of class activities are encouraged, particularly those involving community affairs.

In an effort to ensure proficient training of prospective teachers, workshop experience relating to the inservice development of supervising teachers is needed. On this matter, Herman Behling states:

> Programs specifically designed to provide experience which will produce competent teacher educators for Centers are needed. This approach is more enlightened than the assumption that competent persons can be found. 13.

Colleges and universities would assume the support of summer institutes and regular classes during the year for the cooperating teachers so that they would be as effective as possible in guiding prospective teachers. On the job teacher training, then, would be the shared

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13. Herman E. Behling, Jr. Teacher Education in Transition: A Partnership, The Teacher Education Center. Maryland: Multi-State Teacher Education Project (1969), p. 205.

responsibility of both college and school staff.

Only the most capable and qualified teachers would be chosen as cooperating teachers. Demonstrated teaching ability would be the prime requisite in making the choice.

For as George Williams states, "Pursuit of excellence in teaching is the continuing and common responsibility of the profession." [14.]

B. INSERVICE PROGRAMS FOR TEACHERS OF DISADVANTAGED AND ECONOMICALLY DEPRIVED CHILDREN

> Our schools are presently set up to produce "winners and losers". So many of our kids are doomed to failure before they start. We've got to change that if we really believe the schools' primary purpose is to help all of the children of all of the people to develop as unique human beings in terms of their capacity to grow." [15.]

A more inclusive definition of disadvantaged youth would include:

1. inner-city disadvantaged youth
2. rural disadvantaged youth
3. disadvantaged children of migratory workers
4. foreign speaking aliens, refugees, and citizens who are disadvantaged.

Educators have, for some time, realized that the real reason for the failure of the disadvantaged child

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14. George L. Williams, Teacher Preparation: The Road to Professional Autonomy, New York: New York State Education (Feb., 1970), p. 22.
15. Dean Corrigan, p. 10.

stems from the inability of an essentially middle-class system to adequately meet his needs. Irregardless of the socio-economic level of a school population, teaching is still geared to the middle-class child. Change takes too long to implement, many curriculum materials lack relevance to the child's life, and cultural resources of a particular community are ignored.

Teachers do make a difference. It is the teacher who can make school meaningful and important to the poverty child. Yet teacher training lacks effective instructional skills, methods, and materials which will meet the needs of poverty children. There is no training in approaching these children in a sensitive manner as individuals. There seems to be a lack of on-going inservice education for teachers, counselors, educators, and administrators concerning the needs and problems of disadvantaged youth. The need for a reorientation in the training procedures of both elementary and secondary teachers can be met in specially designed summer workshops.

Rapid turnover of teachers in poverty area schools indicates a lack of fulfillment on the part of the teacher. There is a definite need to recruit and train persons who will stay in poverty area schools. Training then would include a full semester of work in a poverty school, with supervision by an experienced teacher, and a training geared to the knowledge of the "whole child". The teacher should be aware of the child's home, street, family, culture, and life style.

Programs throughout the nation have attempted to bring together the elements necessary for a practical preparation and inservice training for teachers of the economically disadvantaged child.

Several studies have been made to ascertain the extent of the preparation of teachers and other school personnel who work with a large population of disadvantaged youth. If we are to improve the lot of these children, this study is of utmost importance. As Theodore Lang tells us:

> Poverty, discrimination, and a dearth of qualified personnel are among the complex problems depriving inner-city children of their education. 16.

The ultimate purposes of these studies is to describe selected programs to improve knowledge, skills, and attitudes of school personnel working with disadvantaged children. They were to identify unique and significant elements of such programs, and to develop basic concepts and guidelines for emerging programs.

1. CURRENT TRAINING PROGRAMS

Fordham University in New York City has a three phase program based on the theory that teacher training does not end with certification. In phase one, students serve as school aides and assistants in social work agencies. Emphasis in this phase is place on the physical, psychological, and social factors which effect development of inner-city children.

16. Theodore Lang, Manual for Utilization of Auxiliary Personnel, New York: New York City Board of Education, p. 13.

During the second phase students are assigned as paid assistants in inner-city schools. Approximately twenty hours a week are spent in this situation for the entire school year. Course work during this period stresses methodology and psychology.

In phase three, the students, as certified beginning teachers, work with the University instructors throughout the year.

An evaluation of this program indicates enthusiasm on the part of the prospective teacher. However, no real data on the impact these teachers have on economically deprived children is yet available.

The Syracuse University School of Education combines a year of graduate study which leads to a master's degree with a paid internship experience in laboratory schools in Syracuse's inner-city program. The Urban Teacher Preparation Program includes a six week summer session where interns observe children in a demonstration school. Under the guidance of a master teacher they plan and teach. Afternoons are spent in seminars involving all the activities and aspects of the sociological and psychological background of deprived children.

The work of the intern continues into the school year under a supervising classroom teacher who has been chosen for his experience and successful performance in poverty schools.

Applicants for this program are carefully screened both for attitudes and classroom behavior. However, experience has proved that a sensitive attitude toward

the disadvantaged child does not always ensure adequate classroom performance.

COOPERATIVE URBAN TEACHER EDUCATION PROGRAM (CUTE)

This is a cooperative program operated by the Mid-Continent Regional Educational Laboratory in Kansas City, Missouri, involving higher education institutions and the public school systems of Kansas City, Kansas, and Kansas City, Missouri.

The program emphasizes a realistic and practical approach to problems involving inner-city children. Self-study and analysis is encouraged. Contact and feedback among CUTE Staff, supervising teachers, professional teacher trainers, and trainees is constant.

This cooperative program was open to college seniors. It offered sixteen weeks of field experience and courses in education, urban sociology, and mental health. Direct contact with low income children, in the schools and on the playgrounds and tutorial programs which were community centered enable these prospective teachers to know why their efforts met with failure or success. There was constant contact and feedback among the staff of CUTE, supervising teachers, and professional teacher trainers.

It was hoped that field experiences would enable the teacher to meet the problems that often discourage teachers of the poverty stricken areas due to lack of training concerning daily classroom problems. For, it is not possible for the teacher to help the low income child realize his potential, if, to an effective degree,

he cannot face and solve his problems in the classroom.

Criticism of this program was that it lacked practical application of the skills derived from the intensive short term courses. In one follow-up study conducted in New York, it was found that many plans and changes were forgotten and not undertaken. The bilingual problem is severe, and will continue to be so until an effort to obtain teachers who communicate with minority groups is made.

STEP - TTT

A final report prepared in San Francisco on teacher training describes the 1969-1970 activities of the joint teacher education program of San Francisco State College and San Francisco Unified School District which began in 1966.

To make education more relevant and meaningful to the prospective teacher, the student was expected to experience certain community happenings. He was to go to the county hospital and stay in the emergency room at a peak time. At the Hall of justice he was expected to witness proceedings. He was to apply for a job or assistance at the department of unemployment. At public assistance he was to attempt to get on welfare. No less that two hours was to be spent at each of these places, at a crucial time for each, so that he could sense, watch, and experience what was going on. A written report was required for each trip.

By participation in this cooperative program, which included college, school district, and community

efforts, teachers were trained to be more effective in inner-city schools. In this effort college instructors, district personnel, classroom teachers, community representatives, and teacher candidates were all training together.

Those from inner-city schools team teach or demonstrate in the college instruction. Those from college go into the classroom and work with students and teachers. In turn, members of this group share their training with sixteen other classroom teachers from inner-city schools who volunteer for participation in STEP. Both groups cooperate and thereby train additional teacher candidates.

STEP includes a program to help regular classroom teachers learn new methods and materials and to improve their ability to train student teachers. This involves cooperative study, practice, and a sharing of ideas and materials.

TEACHER CORPS

The Teacher Corps programs are staffed by highly motivated, dedicated interns and team leaders who focus their programs on initiating reform into the ways teachers of the poor are trained and used. Teacher Corps recruits its candidates from college graduates who have little or no formal teaching preparation. A two year training program places heavy emphasis on working with the disadvantaged. The Corps is entirely responsible for the inservice training of its regular staff, and paid apprenticeship is an integral part of the Corps program.

> Sensitive Teacher Corps leadership produces teachers with the sensitivity necessary to work in the difficult classrooms our neglect has created. 17.

This group has realized significant changes in some school districts in the areas of differentiated staffing, increased use of volunteers, and teacher aides, increased training of regular staff, and the use of cross-age tutoring and bilingual education.

The many faceted activities, storefront schools, and tutoring programs of the Teacher Corps interns has resulted in increased P.T.A. attendance, decreased drop-out and absentee rates, and the formation of parent tutoring programs. In effect, the Teacher Corps recognizes the need for change and is willing to experiment with new models and new programs in an effort to effect this change.

The 1970-1972 Teacher Corps Guidelines specifically indicate the need for preparation programs to be competency based, individualized, and to offer university credit for community experiences. A close cooperation between Model Programs and Teacher Corps will reflect the movement toward competency based programs.

In the Georgia Educational Model, continuing training of teachers will be responsive to local situations, needs, and influences. Approximately 20% of the teacher's graduate work for inservice education is to include some involvement in community situations in addition to work with children. In order to be more

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17. James E. Allen, Provoking Change in Education, Report on the 1969 Teacher Corp National Conference, Washington, D.C.: Dept. HEW (1970), p. 2.

sensitive to the needs and attitudes of the people educators are serving, it is essential to become involved in activities other than school activities.

Inservice programs should then have these important characteristics:

1. Have as their major objective the changing of attitudes of teachers toward their pupils.
2. Obtain maximum impact by reaching all teachers in a school.
3. Involve teachers in planning and teaching of these courses.
4. Include, whenever possible, demonstrations and practice lessons with low-income children. 18.

As noted above the Teacher Corps Program attempts to initiate change in the formation of teachers, and in particular in those involved in teaching the poor. It offers institutions of higher education the opportunties and resources to bring about institutional changes. School systems develop Teacher Corps Programs to introduce and expand teacher preparation and instructional techniques. Teacher Corps helps to develop and introduce new systems, but in no way is committed to sustain them on a permanent basis. It sets no time limit on funding, but each institution is expected to show that changes developed through the Teacher Corps Program will be continued and supported by other fund sources.

18. The Education Professions, Annual Report, Washington, D. C.: U.S. Dept. HEW (1970), p. 3.

EDUCATION PROFESSIONS DEVELOPMENT ACT

Education Professions Development Act programs have a very heavy emphasis on training or retraining personnel who work with disadvantaged or handicapped children. All of these programs are geared to eliminating racial, financial, physical, and mental handicaps as deterrents to equal educational opportunities. They are focused on fields with severe manpower shortages, and represent a shift from college based training to long term projects which involve a partnership of colleges and universities, state and local school systems, and the community being served.

EPDA programs for the 1971 fiscal year have been organized under these objectives:

1. Improving Education in Schools serving low-income families; this will include three programs. Concentration on recruiting and training people for low-income schools will be taken care of by the Career Opportunities Program and the Teacher Corps. The Urban/Rural School Development Program will provide retraining of personnel presently serving low-income families.

2. Improving the preparation of all Educational Personnel. Two programs, The Trainers of Teacher Trainers and Teacher Training Complexes have this exclusive objective.

3. Meeting Critical Qualitative and Quantitative Shortages of Educational Personnel.

4. Meeting special needs for educational personnel as they arise and developing and testing solutions for those needs. 19.

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19. Ibid., partial quote, pp. 13-14.

Under this objective, the School Personnel Utilization Program is a pilot program to demonstrate the effectiveness of differentiated staffing.

A program which places emphasis on evaluation has just been initiated. The Urban/Rural School Development program provides five year grants to train experienced teachers in poverty schools. Schools with the greatest need in the area of staff and student performance will be given priority. Specific goals for student improvement and teacher performance must be set. Failure to give evidence of attaining these goals may cause termination of the grant.

The Career Opportunities Program encourages low-income men and women to begin careers as education auxiliaries at the level of their own interest and abilities, with particular interest in recruiting Vietnam veterans. The program encourages advancement to more responsible and remunerative jobs. All projects must be located in schools with high concentration of low-income families.

The Training of Teacher Trainers Program is a process for using full resources of universities, schools, and communities in creating effective and cooperative institutional arrangements for preparing educational personnel. Because of the lack of well developed teacher training programs in some colleges, TTT attempts to provide situations whereby all concerned with Teacher Training will work together. There will be cooperation among teacher training institutions, schools of education, the schools and the community. Every effort is being made under this program to design programs appropriate to individual community problems and settings.

Training Complex Programs are teacher training organizations which facilitate linking preservice and inservice continuum. Generally supported on a multi-year basis, training time will vary according to need. Credentials may be established as performance-based, rather than course requirements. Each complex will have the freedom to determine content, extent, and faculty. Responsibility for teacher training will be shared by universities, schools, and the community served. Differentiated staffing will provide career opportunities for experienced teachers.

School Personnel Utilization Program has as its goal the reorganization of the teaching and administrative staff of elementary and secondary schools. It is hoped that developing differentiated staffs will improve the management, skills, and attitudes of professional personnel. By doing this changes in student attitudes and skills, and increased community participation in education may take place. Under this program State education agencies are encouraged to change their certification procedures, teacher organizations are permitted to participate in major decision making, and universities are persuaded to make needed changes in inservice and preservice programs.

In this project the entire school staff must be differentiated and their roles clearly defined. All instruction staff members must spend at least 25% of their time in direct pupil contact.

Teacher Development for Desegregating Schools Program was set up to meet the special needs of teachers who are or who will be serving in desegregated schools. This program became operational in 1970. Of primary concern under this program is improvement of subject matter and professional competence of inservice teachers, especially those involved in the education of youth in the south. By preparing inservice teachers and other educational personnel to better their teaching performance in inter-ethnic and cross-culture school and community settings, the child will be the eventual benefactor of this program. When institutions are better prepared to do a more efficient teacher preparation job, the need for inservice and retraining will be greatly reduced.

This program is primarily directed to black colleges, and will bring together professionals of divergent cultural and ethnic backgrounds. Since the need for professional upgrading is not limited to any one race, the program is NOT to qualify black teachers to teach white children. By establishing these programs in predominately black colleges, a unique purpose is realized, namely "the bringing together, in a black setting, teachers who otherwise would not have such contacts, perhaps not in a lifetime." 20.

Planned for a two or three year period, continuation of a program is based on satisfactory performance and the availability of funds.

Special emphasis is placed in the fields of language arts or mathematics, and those unique problems teachers must face in recently desegregated schools.

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20. Ibid., p. 72.

It is expected that one of the major results of this program will be that teachers will return to their schools and share their experiences and knowledge by conducting or directing training sessions for other staff members.

In an effort to develop better teachers, to improve the understanding of mathematics content, to develop teaching strategies related to children's learning, and to instill a more positive attitude toward desegregation in the schools, a Teacher Development for Desegregating Schools Institute was held at Florida A and M University beginning with the summer session of June, 1970. This Institute continued throughout the school year with monthly follow-up sessions.

Morning sessions were given to mathematics content, lectures, and group activities. During group sessions participants worked together in developing lesson plans using manipulative and visual materials. Many of these were commercial products, while others were made either by instructors or participants. Following each group session, demonstrations or summaries were given by each group. They were then constructively criticized by instructors and fellow participants. Some group sessions were given to examining and using manipulative materials which were made available in the Mathematics Laboratory.

Several films were viewed and evaluated by participants during the summer session. These were produced by the Nuffield Project, School Mathematics Study Group, and the Madison Project.

In order to put into practice what was being taught, participants worked with children on either a one-to-one

basis or on a team basis. Beginning sessions with the children were spent in discovering the child's interest area in mathematics as well as any need he might reveal. These sessions were, in effect, enriching as well as remedial for the children.

In an effort to have some concrete evidence of the summer's activity, participants were involved in video-taping a lesson. Each one was to select a material or procedure not used before and develop a lesson. At a later time these tapes were viewed by all members of the Institute for evaluation.

Participants were involved in many mathematical activities during the summer session. Materials were made by members to be used in their classrooms. At the end of the session, these were displayed, each in quite an original setting.

Some valuable concepts gained were that children learn more easily if they are able to work on their own level, and at their own rate. Skills are more easily mastered when presented in a logical sequence or as small tasks. Learning can be fun when children are offered a variety of ways to learn, and teachers are most effective when working on an individual basis or with small groups of students.

Participants ended the TDDS Summer Session with greater enthusiasm for the teaching of mathematics. They possessed a greater understanding of mathematical content; had become more familiar with new mathematics curricula and materials, and had developed teaching strategies geared to children's learning. In addition, they were more aware of attitudinal problems prevalent in teaching and working with all kinds and classes of children and adults.

In order to evaluate and to continue to assist the participants' efforts to incorporate their mathematical learnings, follow-up sessions were conducted during the school year of 1970-1971. During these follow-up sessions current problems in mathematic content were discussed as well as teacher/learning situations and interrelationships among students and teachers in newly integrated schools.

In addition to math content, there was a sharing of math ideas and classroom experiences within the group. To each meeting guest speakers were invited, either to enrich mathematical ideas or to give fresh insights on desegregation. It was the aim of all participants to return to their schools and help the children to help themselves, and to know the joy of discovering things for themselves. So with a greater confidence and competence; with more creativity, and an enhanced capacity for effected changes, these teachers returned to their classrooms, refreshed and eager for new things.

The following excerpt was taken from an evaluation made by C. B. Keene on the above TDDS program.

Direct attempts were made to evaluate each workshop by requesting each participant to fill out an Evaluation of Workshop questionnaire. The following strengths and weaknesses were noted:

Strengths:

1. The awareness that problems are naturally accompanying change -- true black and white problems.

2. Workshop experiences make one more sensitive to the needs, wants, desires, and apprehensions of others.

3. Group participation and the opportunity to see other counties and how they operate.

4. Providing host, and/or hostess with experiences to set up professional meetings.

5. The opportunity for direct involvement of speakers and participants. Very good feed-back was given to speakers by members of Math Institute.

6. Subjects covered are timely and helpful.

7. The willingness to share both successes and failures. Sincere dedication of members' willingness for open discussion.

Weaknesses:

1. Lack of enough time to discuss problems and situations as they appear.

2. Not enough administrators exposed to the workshops and many of them need this exposure.

3. Number of people reached is not large enough.

4. The activity topic should be sent to everyone before coming to the workshop.

The tremendous response indicating that participants became more aware of their own feelings about school desegregation justifies the Institute and workshops.

Thirty-six new members are currently participating in another eight week session of TDDS at A and M

University. Weaknesses of last year's Institute are being ironed out, and participants are actively involved in updating mathematical content and methodology, while developing a workable attitude toward desegregation.

During the 1971-1972 school year follow-up meetings will be held at selected schools to extend, evaluate, and improve what has taken place during this summer.

In the past decade numerous programs have evolved under the Education Professions Development Act. In some instances the impact made on teachers and students is worthy of note. However, every program has its own special strengths and weaknesses, and the ultimate evaluation must reach higher than feeling or emotions to actual classroom performance and student achievement. For, as stated in The Education Professions:

> Materials won't produce attitudinal changes. Situations inside and outside schools, interaction between students and teachers, and the public climate of opinion - these produce change.[21]

In the following pages the writer will attempt to describe programs geared to furthering competencies and content matter for experienced teachers involved in teaching the disadvantaged child.

In 1967-68 the third cycle of Teacher Training and Reading Institutes in Poverty Area School Districts took place. Serving both new and experienced teachers, the program strove to provide training and insight relevant to teaching the disadvantaged child.

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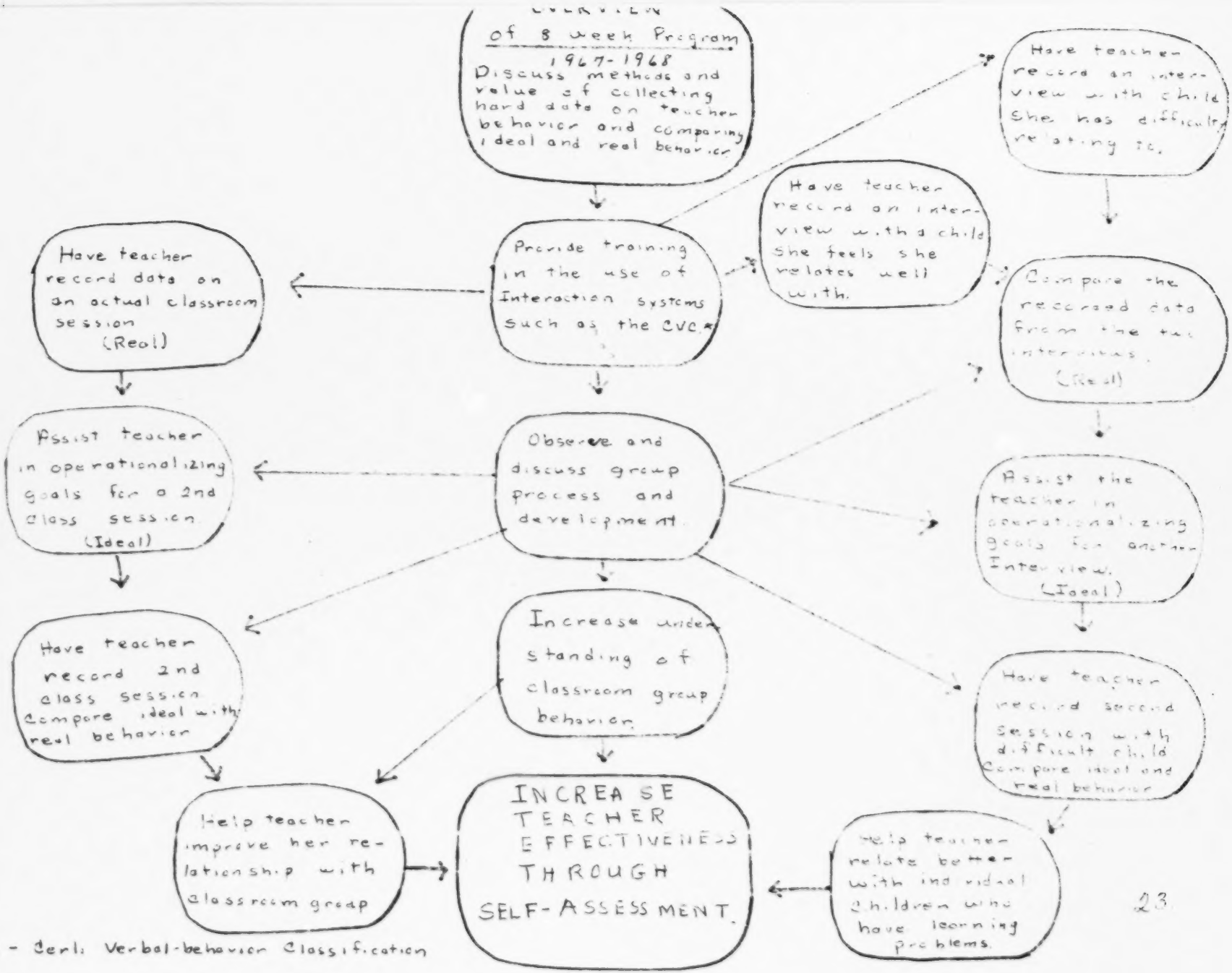
21. Ibid., p. 9.


Overview of 8 week Program 1967-1968
Discuss methods and value of collecting hard data on teacher behavior and comparing ideal and real behavior
Provide training in the use of Interaction systems such as the CVC.
Have teacher record data on an actual classroom session (Real)
Have teacher record an interview with a child she feels she relates well with.
Have teacher record an interview with child she has difficulty relating to.
Compare the recorded data from the two interviews. (Real)
Assist teacher in operationalizing goals for a 2nd class session (Ideal)
Observe and discuss group process and development
Assist the teacher in operationalizing goals for another Interview. (Ideal)
Have teacher record 2nd class session compare ideal with real behavior
Increase understanding of classroom group behavior
Have teacher record second session with difficult child Compare ideal and real behavior
Help teacher improve her relationship with classroom group
INCREASE TEACHER EFFECTIVENESS THROUGH SELF-ASSESSMENT.
Help teacher relate better with individual children who have learning problems.

VC - Verbal-behavior Classification

Lack of interest on the part of district supervisors resulted in many of these programs being planned haphazardly. One of the primary functions of these Institutes was to introduce teachers the latest advances in education, and because of insufficient planning, this happened more by chance. Even though it was realized that the most fruitful training took place when children were present, few demonstrations involving children were given.

The cause for the lack of real effectiveness in these programs can easily be attributed to the time when they were presented. The majority were held during the school year, in places not conveniently located, and at a time when teaching personnel were too tired to actively participate in them. While these Institutes succeeded in providing teachers with some basic skills, they failed in establishing real relevance to the disadvantaged child.

Another ESEA project, the Madison Project of Arlington Heights, Illinois, had two important aspects. Demonstration classes were to inform participants about Madison Project Mathematics, and training workshops would provide for the diffusion of materials into schools.

These series of workshops, involving 214 teachers and principals, were begun in the spring of 1967 and continued throughout the 1967-1968 school year. They were followed up the following summer, and again continued through the school year 1968-1969. The summer session involved presentation of Madison Project Mathematics materials, with small groups of participants working with small groups of children. At a later time the groups

combined and discussed the lessons.

During the academic year, workshops were held at different centers. Some of these were held on a released time basis for teachers, and involved group dynamics and video-taping.

Again it must be said that those workshops which proved to be most successful were those held during the summer or on a released time basis.

Funded under ESEA, the Diagnostic Learning Center of Cook County, Illinois, provided inservice training for teachers of children in grades one through twelve with severe learning problems. Over a period of three years, July, 1966 to June, 1969, Diagnostic Learning Center's inservice team provided seminars to increase the amount of inservice help available to teachers.

> Until September of 1967, the inservice function of the Diagnostic Learning Center was carried out through the Diagnostic Learning Center Staff members' consultation with the individual teachers of the children involved in the Center's program. This provided an on-going, informal inservice training for a limited number of teachers. 22.

Because this method reached too few teachers, additional specialists were trained for the summer. For the 1967-1968 year inservice seminar groups met for approximately three hours a week for eight weeks. A flow chart, reproduced from this final report is on the next page.

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22. Stephen D. Barry, Donald L. Wegener, Diagnostic

During the 1968-1969 school year participants met for three hours a week over a period of four, six, or eight weeks depending on the purpose of the seminar. The primary goals of these inservice meetings was to give the teacher an opportunity to assess his actual interaction with problem children, and to determine whether or not his teaching behavior was promoting the desired effect on the child. To quote from this final report:

> Increasing teacher effectiveness usually implies growth on the part of the teacher. The process of growth is characterized by change in behavior. Teachers are often unable to see a need or establish a direction for change unless they are aware of their actual behavior and the implications it has for the student. Change doesn't usually come about unless the person is dissatisfied with what actually exists. 24.

And so, in these seminar groups the use of professional resources, professional materials, and resource people was effected. Video-tape recordings gave visible evidence of the need to change. On the part of the teachers there was a willingness to participate, for they saw a need and were more receptive to new ideas. A major portion of the seminars was given to sharing ideas, opinions, and teacher reactions to difficult situations.

A Florida Migratory Child Compensatory Program was designed for a fuller understanding of the migrant child. An exchange of ideas helped individuals to develop an awareness of migrant cultures. Out of the program came

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24. Ibid., pp. 64-65.

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22. Stephen D. Barry, Donald L. Wegener, Diagnostic Learning Center: Final Project Report 1966-1969, Washington,

the realization of what needs to be done to provide more enriching educational experiences for the children of migrant workers. A workshop was carried on during the school year, but it was felt that a summer session would provide a longer time to reach workable solutions to the educational and social problems of migrant children.

A training program, geared to teachers of disadvantaged youth, and in particular migrant youth, involved thirty-six teachers, seventeen experienced and nineteen inexperienced, in a seven week program. These teachers were observed in actual classroom situations and their behavior was compared with the behavior of teachers not in a disadvantaged situation. It was found that these teachers employed greater use of drill, were more directive, used praise more often, were very traditional in pedagogical techniques, and that their behavior pattern was more consistent. It was recommended that teachers be made more aware of migrant culture and characteristic behavior of migrant children.

In order to better prepare teachers to work with migrant children, Western Michigan University provided a program that would make provision for inservice education, at a graduate level, for twenty-five teachers active in schools with a large percentage of disadvantaged youth. The summer session included full time laboratory experiences with disadvantaged youth in camps, classrooms, and other educational situations. Seminars were held to coordinate and evaluate experiences.

Another program involved preservice and inservice teachers who were selected on the basis of interest,

application, and recommendation to take part in a summer session. Participants were given a bibliography of selected readings, and encouraged to read and discuss some of these books. Understanding and concern for a culturally different group can be achieved only by active participation in their daily lives. Members, therefore, visited homes, took children on picnics, babysat, became involved in Police Commission Board Meetings, juvenile courts, migrant camps, and juvenile homes.

During the summer of 1967, the Van Buren Intermediate School District operated three centers to provide educational experiences for migrant children and to teach teachers to work effectively with these children by actually working with them.

All participants were certified teachers, though some had not had any actual teaching experience. Team teaching provided excellent experiences for the teachers and gave them an opportunity to become more introspective.

Evaluation of this program indicated inadequate teacher preparation, recruiting of children was not well-planned, the school district did not want the program and curtailed the use of facilities and equipment. This was to be a training situation, and there should have been more evidence of training activities. It showed a decided need for warmer and more accepting teachers.

Yet another program was held in Bellingham, Washington, for teachers of highly disadvantaged children. Fifty participants were involved in this program which fostered the team teaching approach.

During the session there was a week long camp activity with the children in an attempt to build up trust and improve the child's self-concept.

This proved to be a strong program, even though members would have preferred more activities with the children, and fewer guest speakers. Because there were both supervisory and teacher personnel in the group, opportunity for more effective follow-up was present.

The University of Texas held an Institute for Elementary Teachers of Spanish-speaking disadvantaged children. It was designed to provide teachers with the special skills, knowled e, and attitudes needed to increase the academic achieve ent of these children. The program included advanced study in new techniques and materials concerned with the language development of Spanish speaking children. In addition to language, focus of the Institute was also directed to Spanish culture.

Involved in this program were twenty-two teachers and eight supervisors. The actual practicum experience extended to six weeks of the nine week session. Participants worked extensively on language pattern drills. Attention was given to new techniques in spelling instruction, handwriting, and creative writing. Field trips further oriented the participants with the needs of the disadvantaged.

The flexibility of this program and its ability to meet participants' needs were important characteristics.

Specific provision was made for follow-up activities and school supervisors were urged to give participants full support in applying what they had learned.

To increase teacher competency and to achieve a greater understanding of the concern of parents of disadvantaged children, the National Institute for Advanced Study in Teaching Disadvantaged Youth sponsored an intensive retraining program for teachers of these children in Westchester County, New York. There were two one month sessions with teachers grouped in teams. Activities involved planning, teaching observing, and evaluating. Mornings were utilized in working with children, while afternoons were given to planning, critique of morning sessions, review of new materials on display, and meeting with parents.

An evaluation conducted by interviews with participants indicated a low level of execution. Due to the inflexible demands of the regular school year, the number of classromm changes was slight.

New Mexico State University included six days of inservice work with teachers of Carrizozo Public Schools to make these teachers more aware of the diagnostic skills to improve students' reading comprehension. Activities included demonstration lessons by Research Center Personnel, examination of materials, development of lessons and materials, and discussion of techniques and principles. An evaluation of this program suggested the use of video-taping for teacher self-evaluation.

In New York a program was constructed to train paraprofessionals, but extended its participants to in-service teachers in need of retraining for more effective work with inner-city children. This program employed demonstrations, workshops, role playing, job situations, seminars, and the use of multi-media. It gave insight to practicing teachers on the possible child advantages in using paraprofessional help.

In Redding, Shasta County, California, 120 teachers and teacher aides working with 300 rural poor children comprised a program involving a thirty hour training course. This program included training in pupil life styles as well as the reading and mathematics needs of the children. Varied techniques were used, but more significant was the measurability of test results because of pre and post tests given to the children.

A Mexican-American Education Research Program conducted a series of eight television programs for in-service training of teachers of Mexican-American children with language difficulties. For many of these children school was their first encounter with the English language, and most teachers were unable to cope with the situation. The television series attempted to provide knowledge and skills for teachers of these children.

In a kindergarten Institute, equally composed of black and white participants in Nashville, Tennessee, the program stressed the fusion of theory and actual practicum experience. Background materials was presented in seminars which were directly related to laboratory experience.

This was a well-planned program which had extensive group interaction, and an exchange of information and understanding between black and white participants.

There was widespread acceptance of a program initiated at Wayne State University and executed in cooperation with the Detroit Public Schools. In the belief that it is at the elementary school level that a developmental guidance program must begin, it focused upon the need to change the attitudes and values of elementary school children. In a two phased program fifty participants and guidance personnel from six public schools became more aware of the need to help minority youth.

The educational problems of disadvantaged children was the focal point of the Harvard Boston Summer Program in Urban Education. An extensive seven week clinical training for 197 experienced teachers, principals, and guidance counselors from a mixed economic and racial area attempted to improve the quality of teaching and to facilitate change in teacher behavior. A unique feature of this program was the planning, teaching, and observation cycle. In teams of twenty-four participants, eight were planning, eight were teaching, and eight were observing. Each team completed two PTO cycles with a week devoted to each phase. Efforts of participants to develop curriculum for the children were directly related to the children's needs and life situations.

This program was designed on a professional level, and proved to be an effective instrument for teacher re-education. Though difficulties were encountered in the pilot stage, the program succeeded in involving both the University and the Public School System.

During 1965 almost three and one half million dollars of National Defense Education Funds were used to help teachers to understand and work effectively with the unique and peculiar problems met when teaching disadvantaged youth. More than 2,000 teachers participated in sixty-one summer Institutes which served to guide and stimulate them. A brief resume of some of these programs follows.

Brooklyn College in New York conducted a six week Institute to extend knowledge and understanding of emerging problems in urban communities, to increase skill in understanding and communicating with disadvantaged children, and to increase ability in making and using new media which will meet the academic deficiencies of culturally deprived children. Because of the low level of self-concept in these children, participants were encouraged to develop meaningful and rewarding experiences for them. Neighborhood, community, and personal experiences of children were the background for building vocabulary. Small, informal class situations provided opportunities for innovative approaches to teaching. In order to follow-up the summer activities, a questionnaire was sent to each participant in the fall.

A summer Institute for Elementary and Secondary School Teachers of Disadvantaged Youth was held at the University of Puerto Rico, based on the idea that endeavors to improve education must effectively center on the classroom teacher. Eight weeks were spent with inservice and preservice teachers in an attempt to provide appropriate methods, curriculum, materials, and approaches to functional classroom management. While the program explored

the problems of the disadvantaged child, it sought to improve the efficiency of teachers working with these children. Emphasis was placed on improving the child's self-concept and areas of family labor and social pathology. Home visits and field trips to disadvantaged neighborhoods provided close contact with life conditions and resulted in greater insight and empathy.

Realization of the fact that the turnover rate of teacher personnel was higher in schools largely populated by disadvantaged children, a summer Institute was conducted at Glassboro State College in New Jersey. With the hope that returning teachers would influence their colleagues, seventy-one participants were involved in the exploration of instructional techniques, development of an effective school plan, and an understanding of the psychological and sociological background of disadvantaged children. Realizing that these children function most effectively in experience oriented activities, participants developed a series of activities to be used during the coming school year.

In Jackson, Mississippi, an Institute was conducted at Jackson State College. It operated on the philosophy that the black teacher in the south must be helped to see himself as a worthwhile individual, capable of a definite contribution to society. Participants were products of disadvantagement, and currently living in small towns of rural Mississippi.

Broader contact with the larger world was essential for these teachers, and field trips to colleges, research centers, and places of interest were an integral part of

the Institute. Evaluation by the AWARE team indicated that great efforts to refresh teachers in the core subject matter, and to extend teacher knowledge was made. Enhancement of self-concept was realized through an imaginative and sound planning. However, an exhausting pace of six days a week from seven until five-thirty with every minute planned, left little time for discussion.

Because of a lack of support on the part of Western Montana College, the Institute for Advanced Study for Teachers and Supervisors of Disadvantaged Youth had little positive impact on participants. Under great difficulties caused by college attitudes, the participants strove to a better understanding of the Indian People. The AWARE team thought that there was not sufficient teaching contact with children, and methods used did not involve the more recent developments in techniques and approach.

The University of Omaha conducted an Institute which involved fifty of the most influential teachers and supervisors serving disadvantaged youth. A seven week session was concerned with the study of child development and methods to be used in stimulating language improvement and developing reading skills. This creative and experimental Institute provided disadvantaged children with an enriched summer school experience.

A summer Institute for Preschool and Kindergarten Teachers and Supervisors of Disadvantaged Children was held at the New York Medical College Institute for Development Studies. The program emphasized learning disabilities and covered the use of appropriate programming

of materials and procedures. An intensive study was made of the psychological and sociological factors in the life of a disadvantaged preschool and kindergarten child. Participants made materials relevant to their own school situation. The program included a sequential order of formal class sessions which participants actively observed. They were expected to act as assistants to the teachers. Conferences evaluated classroom activities.

Follow-up activities indicated that implementation of summer session was made, and there was an apparent positive change in teacher attitudes toward disadvantaged children.

Ball State University in Muncie, Indiana, conducted an Institute involving twenty-nine mid-western teachers to improve their understanding and skills in working with the disadvantaged. During the eight week program the faculty and participants lived and worked in the same building. In addition to lectures, films, tapes, readings, introduction and use of materials, conferences, and field trips, there was intensive teaching experiences with disadvantaged groups.

There was a definite follow-up plan whereby participants were able to call on faculty members as problems arose during the school year. As stated in the report:

> ...Planning program process, selection of staff and participants, tone, balance between cognitive and affective aspects, and the meeting of the needs of the participants left little to be desired. 25.

25. Gordon J. Kloff, Garda W. Bowman, Teacher Education in a Social Context, New York: Bank College of Education (January, 1966).

In Medford, Massachusetts, a summer Institute was held for sixty teachers of disadvantaged children in the public schools of Boston. This program included classroom laboratory and field work with the disadvantaged children and their families. The seventh week of the Institute was devoted to intensive sessions of lectures and skill building sessions. This particular Institute lacked cohesiveness among members, and the recommendation was made to have sensitivity sessions earlier in the program.

Follow-up sessions were held during the school year to determine whether or not innovations had been implemented, and to discuss problems, knowledge, and understandings.

Dominican College in Racine, Wisconsin had for its primary aim the training of teachers in the special skills needed to meet the needs and problems of disadvantaged children. A two week intensive workshop with guest lecturers for general sessions was followed by a six week practicum experience. Morning teaching sessions were evaluated during conferences. In the ninth week, the program was evaluated by participants and staff members. It was hoped that through improved education of children, families would be indirectly effected.

An Institute at Goucher College, Baltimore, Maryland, provided a parallel learning situation for teachers and students. The six week Institute sought to achieve new insights into student behavior. The program included three daily class experiences, evening lectures, panels and film programs, and discussions on inner-city teaching and related problems.

The class in English included observation of a master teacher working with twenty-two tenth and eleventh grade students. These classes were followed by an evaluation of what had taken place. The class in Sociology and Role Playing Techniques gave participants insight into personal experience in relation to inner-city environment. The value of role playing as a teaching technique was realized by all.

At the end of the Institute there was achieved a marked development of sensitivity and a strengthening of self-concept. A need for a longer Institute was noted, as well as the need to add a public school administrator to the staff.

To meet the need for better prepared teachers to staff inner-city schools in Washington, D. C., the District of Columbia's Teacher College conducted a six week Institute. Fifty secondary school teachers and twenty-six junior high school students participated in this program. Lectures were given by visitors familiar with the needs of the disadvantaged. Library materials were available to participants. Community agencies were used for first hand working experience with children. The program included discussions on curriculum and human relations, new instructional material, methodology in each teacher's subject area, and supervised independent study.

Children attended the Institute from eleven until two each day. In addition to bus fare, lunch was also provided for the children. From eleven to twelve, they provided the demonstration class for the workshop. Master teachers utilized these lessons to demonstrate new

materials and methods. From one to two the children were individually taught by the participants.

Though this program was thought to be too short, the children showed marked improvement because of the intensive personal attention they had received.

Pennsylvania State University conducted a Language Laboratory Program in English and Reading for teachers working with disadvantaged children. Thirty teachers, principals, and supervisors from the junior and senior high school level took part in this program. Three courses, Remedial Reading, Linguistics, and Communication stressed competency in the use of new techniques and materials.

Evaluation was made by pre and post tests and a comparison of tapes made by participants. One tape had been made before the Institute and the second when teachers had returned to their classrooms in the fall. Outstanding rapport was noted between staff and participants during this Institute. It achieved a significant change in perception about subject matter and attitudes toward the disadvantaged. All involved thought more benefits would be derived from a longer program.

An intensive program of cognitive learnings in the fields of cultural and social anthropology, sociology, and psycho-dynamics was conducted at Hofstra University, Long Island, New York. Forty participants from New York Junior High Schools were involved in this program which included lectures and seminar discussions. Little provision was made for practicum experience.

Participants suggested that the demonstration class be eliminated, and experience be provided in the regular summer session for secondary children.

A major lack in this program was the absence of an on-going academic year follow-up to provide assistance and supervision to participants as they needed it.

An EPDA Project to prepare graduate and undergraduate Indian teacher aides to educate American Indian children was conducted at Northern Montana College in the summer of 1969 and continued through the summer of 1971. It involved a three year coordinated program of nine week summer Institutes and school year inservice training programs to prepare fifteen graduate teachers and fifteen undergraduate Indian teacher aides to perform specialized roles in the education of this neglected minority group. This length of time was deemed necessary for it was felt that shorter programs would have little or no impact.

Teams were formed of three graduates and three aides, and each team worked in the elementary schools on the Rocky Boy's Indian Reservation or in the city of Havre during the sumers of 1969, 1970, and 1971.

It was felt that the close association of the graduate teacher with the Indian aide would provide the teacher with greater insights into the ways of the Indian people, and thereby create an understanding that would enable the teachers to better meet the needs of the children, and to know, understand, and appreciate them. It was also hoped that the Indian teacher aides would serve as models of attainment for the Indian children.

Into this program was fused an understanding of the history, culture, sociology, and psychology of Indian People. Participants were expected to understand and apply various techniques and strategies for individualized instruction, to understand the principles of discovery learning, to obtain, evaluate, and utilize teaching materials, and to apply effective human relations.

As a result of this program, aides who wished to become teachers were recognized at Northern Montana College.

Though no real proof of final evaluation is available at this time, the school years of 1969-1970 and 1970 and 1971 were to be utilized to consider, evaluate, improve, and perfect the work of the teacher and the teacher aide.

A final report on the Inservice Education Series and Consultant Services conducted at Arizona State University stated that this was a positive, stimulating, and refreshing experience for personnel and participants. Excellent materials were used, and cooperation and teamwork were excellent. This was an extensive series of workshops with consultant assistance to the Indian Community. A resume of these workshops follows.

On April 1, 1967 an audio-visual workshop was held to introduce a variety of audio-visual materials. This was an effort to show what was available, as well as how to use them.

A Social Studies Curriculum workshop was held

on April 7 to promote an attitude of learning that would be on-going and continuous, to see the need for a social studies program which would meet the needs of the student, to share methodology, views, and research findings in social studies trends, teaching reading through social studies, correlating social studies with other language arts, and to provide outside reaction based on direct observation of classroom teaching.

On April 15, a Language Arts workshop was held. Special emphasis was placed on areas in greatest need of improvement. The program included self-evaluation, integrated language arts discussion, afternoon workshops on oral communication, written communication, and children's literature.

On April 24 and 25 a Modern Mathematics workshop discussed implementation of mathematics education. Films were used to present the discovery approach to mathematics. Groups explored materials and activities.

On April 28 and May 12 an Elementary Science workshop was presented. Participants were engaged in a series of experiments developed through the use of prepared kits. The philosophy of science education was presented, followed by a presentation of materials to be used in the school.

During March, April, and May reservation teachers visited twenty-four elementary and secondary schools to observe educational practices being carried on in some innovative schools, and to give them the opportunity to observe other educators work with cross culture groups

who had learning problems similar to those of their own pupils. This observation resulted in a sharing of ideas and reactions.

The Arts and Crafts workshop included activities related to Indian culture. Actual art experience was the background for technical training and use of materials. Children found that art can be pleasurable when it is properly taught.

Suggestions from the participants included more time for each workshop, more individual attention for each participant, more and different programs which would not be so hurried, and more time to acquaint themselves with new materials and equipment. Participants felt that the workshops had a definite effect on their teaching techniques.

In 1969 a Program of Professional Development was conducted by the Los Angeles Unified School District. A six week summer workshop dealt with the problems and methods of teaching Negro, Mexican-American, and other minority group children.

A two program component, coordinated by different sets of leaders on alternating schedules, involved two hundred and eight teachers and auxiliary personnel of the Jordan and Garfield Complexes in Los Angeles. The methodology component explored teaching materials and techniques through resource people, research projects, and field trips. The human relations component, focused on feelings and attitudes, was led by psychology and group dynamic specialists. The entire group was also involved

in a sixteen hour spring planning phase to explore problems in teaching minority group children.

While the strength of the program was the interaction of the groups, weaknesses were evident in too small methodology groups, alternating schedules, and a failure to involve administrators in the operational phase.

In April of 1967 three conferences were held, one in Chicago, another in Cleveland, and the third in Wisconsin to study reasons for continual pupil failure. A revamping of teacher attitudes about the abilities and capabilities of disadvantaged children was necessary. All children cannot be taught in the same manner. Many times inservice programs are so concerned with teacher competencies in methods, techniques, and procedures, that the need to develop positive attitudes toward the disadvantaged child is overlooked. Teacher education, both preservice and inservice, must seek to serve pupils with the treatment and programs of work which will benefit the children.

In twenty areas of Kentucky inservice programs were geared to improving the values and benefits of teachers and their relationships and responsibilities to the disadvantaged. Bi-monthly workshops were conducted by well-informed consultants of language arts. Participants were shown the latest and most widely used materials, and given the opportunity to use them in their classrooms.

Ten school systems in New York sent teams to participate in a six week summer session for the specific

purpose of developing the knowledge and skills that will enable them to become critical change agent teams in the area of social studies and science. These teams were made up of principals and teachers representing the same school so that both could act as resource persons to the remaining faculty. By doing this, it was hoped that more effective implementation of the project would take place.

The summer program was to deal with social studies and science, but only as a means to develop curriculum leadership. The effectiveness of this program was to be judged by the number and nature of inservice curriculum projects undertaken by the participants.

Conferences were held during the school year to evaluate and renew experiences and skills, and for the purpose of discussing the results of the program during the year of implementation.

The central mission of the Stanford Center for Research and Development in teaching is to contribute to the improvement of teaching in American Schools. In light of this mission an Institute was conducted to retrain teachers in multi-cultural education.

Divided in two parts, the first session was a training session which took place in the summer of 1969. The second part was a two semester program during the school year in which participants were to put into practice what they had learned during the summer session.

Three major objectives were:

1. to develop a pilot program for retraining classroom teachers in

relation to black culture and history, white racism in America and its institutional manifestations in the American School, and the Black experience in literature.

2. To initiate the development of curricular materials that confront and eliminate the racism of public school students, working in collaboration with the teachers participating in the pilot program in the area of social studies and language arts.

3. To formalize a program of retraining and curriculum innovation that can be used by teacher training institutes throughout the country. 26.

This was an eight week program with two sessions. The first two weeks were working periods for research and retraining, followed by a six week pilot program. Included in the program were sensitivity training sessions to identify attitudes. Participants were teachers from the Ravenwood School District and were a racially mixed group. The Institute was devised and administered by black educators, and the teachers were in service in a school district governed by an all black school board and a black superintendent.

Information and understanding gained during the summer were expected to be tested by daily experience during the school year.

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26. Robert W. Heath and others, Evaluation of an EPDA Institute "Teachers for Multi-cultural Education, Washington, D.C.: Department of HEW (1970) p. 9.

An Institute in Negro History and Culture was held at the University of Southwestern Louisiana during the summer of 1969 with follow-up sessions for the school year. Involved in this Institute were twenty-five teachers and counselors for grades one through twelve from sixteen states.

This was an Institute with many objectives: to improve the teaching of the negro student; to prepare negro and white teachers to teach in predominantly black schools; to develop healthy self images in negro children; to prepare educators to deal with race relation problems; and to prepare teachers to teach courses containing negro culture.

An extensive program in black history and culture was offered through lectures, group discussions, tapes, films, and other visual aids. Participants' reactions were favorable. They enjoyed the informality and flexibility of the Institute Program, were impressed with the interestedness of the staff, and the freedom to individually pursue the study of Negro history and culture. The greatest value of this Institute was the attitudinal change of participants.

Bishop College in Dallas, Texas, was the location of a Sensitivity Training and Faculty Desegregation Institute held during the summer of 1969. This Institute was not rigidly designed, but was an attempt to develop in teachers and administrators a greater sensitivity to ethnic backgrounds and learning achievements. Staff members were aware of the fact that without orientation experiences to help in the adjustment to integrated

teaching situations there was a great danger that pupil learning would suffer.

The Institute dealt directly with the attitudes of teachers and their influences upon the effectiveness of instruction in desegregated situations. Methods employed were lecture, role playing, dramatization, dialogue, field trips, observation tours, and visual aids which included the CBS series on "Black America".

A bi-racial staff conducted the Institute which included fifty teachers, administrators, and staff personnel. Noted again was that the predominant emphasis in teacher training is geared to a middle class white society and little attention is given to adequate teacher performance in a classroom setting of lower income children. A study of the disadvantaged child was made, a study which involved his sub-standard living, his low level self image, and his cultural background.

Teachers carry into the classroom their own prejudices and empathies, and only a desegregation of attitudes will lead to true integration. And, while human nature cannot be changed, human behavior can.

Effective outcomes of this Institute included a sense of awareness to situations in desegregated schools, and the knowledge that a better understanding of ourselves leads to a better understanding of others. Not all prejudices were eliminated, but participants were better equipped to work in the midst of them and lessen their effect. Participants were encouraged to use what had been gained in every phase of daily living, and by so doing become better human beings able to teach more effectively across cultural lines.

To develop some common understandings about crucial integration issues, an inservice training program was conducted by the Evanston School District in Illinois.

This was an on-going Institute which began during the summer of 1967 and continued through the summer of 1969. Involved in the first phase of this program were three hundred teachers and administrators. During the 1967-1968 school year teachers and administrators indicated that tremendous benefits had been derived from the summer Institute. The 1968 summer Institute was created to form a set of common understandings concerning certain issues for all educators. The following ten understandings were identified and studied during the Institute.

1. Black Power and its Effect on Racial Interaction
2. Common Prejudices of Negroes and Whites
3. Discipline Standard in Integrated Schools
4. Family Background and School Achievement
5. Grouping Children in Integrated Schools
6. Interpersonal Relations Among Students
7. Race and Intelligence
8. Sensitivity to Interpersonal Relationships
9. The Black Self-Concept
10. Negro in American History [27]

27. _____, Discipline Standard in Integrated Schools, Resource Manual, Washington, D. C.: Office of Education (1968), p. 13.

Ten small groups of Institute members were formed. Each was given the task of writing a resource manual and Unipass on one of the ten understandings. In addition, Institute consultants made thirty minute film shorts on each of the ten issues. Together, the written materials and films were to serve as a basis for a district wide inservice training during the school year. It was suggested that all staff members of a school participate in this program which would focus on one crucial issue a month. Meetings were to last approximately an hour and a half, and would include meaningful discussions.

This proved to be an extremely valuable experience in personal and intellectual growth, and made more teachers realize that their conscious and unconscious attitudes toward children affected their behavior. Another realization gained was that discipline principles are the same for all races, and should promote the student's self-respect.

An evaluation Institute on Inter-ethnic Aspects of Public School Education was held in West Virginia at Wesleyan College. The evaluation showed very little change in abstract attitudes held by the participants or in their awareness of subtle acts of prejudices and discrimination. There was, however, a greater change in the area of making people knowledgeable about concrete objects and procedures.

In commenting on this Institute, John Himelrick states:

> An awareness of the need for inter-ethnic education in West

> Virginia was created by the Institute. The repercussions had been evident in numerous ways, and it was the opinion of the evaluator that real movement in interethnic education was generated which would have lasting effects on the quality of Education in West Virginia. 28.

Professional Development Centers were established to improve the instructional skills of classroom teachers of Kindergarten through grade six, where pupils were from socio-economic backgrounds, and who were achieving below grade level academically.

In the schools selected there was to be available a sufficient number of master teachers to act as resource persons or model teachers. Master teachers were selected on their demonstrated ability:

> to develop innovative and creative teaching strategies
>
> to implement curricula
>
> to function as a teaching team leader and plan activities for team teaching
>
> to organize a classroom in a manner that would give all pupils meaningful experience
>
> to direct and supervise activities of inexperienced teachers and aides, and

28. John B. Himelrick, Evaluation Institute on Interethnic Aspects of Public School Education in West Virginia: Final Report, Virginia: Wesleyan College (April 30, 1970), p. 13.

to diagnose learning problems and prescribe treatment for the participants in the PDC program. 29.

Conducted in California, the projects were held at Compton, Fresno, Long Beach, Oakland, and Richmond. Five pilot schools were selected on the basis of those schools which had the highest concentration of under achievers. Those teachers who were to receive training for this program had to commit themselves to teach in a satellite school for a minimum of two years after competing their training. Each pilot school was to conduct a summer session to enable teachers to implement their newly acquired skills.

Each training program involved four cycles during the regular school year as well as a summer school program. This permitted immediate classroom application of newly acquired skills. Teachers were trained through inservice meetings with project staff, outside consultants, workshops, question and answer sessions, and audio-visual presentations.

The Compton Project served an area with a predominance of low income families, and a high rate of minority groups. In this project, cycle one retrained replacement teachers who taught the classes of teachers from satellite schools who were trained in cycles two, three, and four. Since an eight week program is hardly sufficient for the desired change in teacher behavior, it was recommended that reinforcement of techniques and attitudes acquired in PDC training be made. It was felt

29. William C. Theimer, Jr., and Marvin E. Locke, Learning to Help Them Learn: An Evaluation of Professional Development Centers, California: Laboratory of Educational

that the Compton Project made a positive contribution to the retraining of teachers working with disadvantaged children.

Each of the five projects were implemented in a manner similar to that of Compton. Each, however, was successful in fulfilling objectives to a different degree. Oakland had a carefully documented measure of objectives, and, as reported in Learning to Help Them Learn:

> Their summary report can profitably be used as a model for showing the congruence between objectives, program elements, and evaluation of PDC programs. 30.

Even though the teachers felt that they had benefited from the program, the Richmond District decided to discontinue it.

In summary of this program it might be said:

> A group of teachers has been trained to be aware of the cultural differences of inner-city students. As these teachers continue to work within their schools, the training they have received should become evident in their increased competency and be reflected in the achievement test data of children whom they teach. 31.

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30. Ibid., p. 49.

31. Ibid., p. 50.

CONCLUDING REMARKS ON TRAINING OF TEACHERS FOR WORK WITH DISADVANTAGED CHILDREN

What have the federally funded programs under NDEA done for the disadvantaged child? They have made an attempt to break away from formal courses, and thereby have provided functional preparation for experienced teachers. In proportion, studies have shown that there were twice as many comments made on understandings acquired as on techniques learned. Therefore, future Institutes should place more emphasis on teaching strategies, methods, and materials. B. Ontaniel Smith makes this comment:

> ...directors of Institutes believe that teachers will find a way to deal with their instructional problems if they have the desire and an appreciation of the child's situation.
>
> This trust in inspiration and devotion partly explains the failure of most programs to bring about school improvements. It does little good for a teacher to understand that he should accept the child and build on what he is if the teacher does not know how to assess what the child brings and lacks the skills necessary to work with him. Acceptance and respect for a child as a human being, belief in his potential, and understanding of his social and emotional situation are all very good when they are expressed in appropriate teaching performances. In the abstract they are little more than pious expressions. The experienced teacher in search of help in his efforts to work more effectively with children might in justice lament, "Show me not the end without the means." 32.

32. B. Ontaniel Smith, Teachers for the Real World, Washington: The American Association for Colleges for Teacher Education, (1969), p. 155.

Included in the criterion for selecting participants in any program should be their potential effectiveness as change agents in their own schools.

Institute training should include three phases: pre-institute, institute, and post-institute. Special reference should be given to an application of learning to the school program. Evaluation should be made an integral part of every Institute.

Programs should be set up so that instructional content is integrated with an understanding of the disadvantaged child. Assistance in translating such understanding into teaching behavior is essential. A thorough knowledge of, and an application of, the diagnostic principles and skills will enable the teacher to evaluate each child's potential. Use of this information will enable the teacher to design appropriate experiences to influence the child's learning.

C. PROGRAMS, NOT NECESSARILY FOR TEACHERS OF DISADVANTAGED CHILDREN

Not all inservice programs were geared to help teachers of disadvantaged children. Some were geared to teachers of all children, and did not exclude participation by teachers of the disadvantaged. They all included attempts to change behaviors, basic attitudes, knowledge, and skills.

An inservice program in elementary mathematics should consider three categories of educational personnel;

experienced teachers, inexperienced teachers, and principals.

For experienced teachers programs must attempt to change attitudes toward contemporary mathematics and provide knowledge and skills. In order to improve attitudes toward mathematics, there is a need to assure teachers that their present knowledge will be the basis for continued learning. In beginning at teacher level, the teacher is not exposed unnecessarily to the whys and hows of mathematics, but is led to explore and experience the excitement of discovery.

Inexperienced teachers may be knowledgeable about mathematical content, but lack the know-how of presentation. They lack experience in the manner of procedure and the use of materials. Inservice participation will enable them to learn more about techniques of working effectively with children.

Principals should most certainly be involved in an inservice program, for, without their support and cooperation, implementation of any innovative procedure is almost impossible. They need to be actively involved as learners and leaders. As learners they can update their mathematical knowledge, and as leaders they can plan, implement, and organize innovations in their school. Special inservice programs can be directed to improve the principal's role of leadership.

Harold H. Lerch tells us that program content and procedures should be

> ... a planned, continuous improvement of the instructional program for

children. Continuous improvement requires a long-term comprehensive inservice program, rather than individual workshops or study sessions. In such a comprehensive program, three major steps are involved:

1. Evaluation of the mathematics program;

2. planning, including the conducting of study sessions for teachers and principals; and

3. planning, organization, and implementation of improvements in the classroom programs. 33.

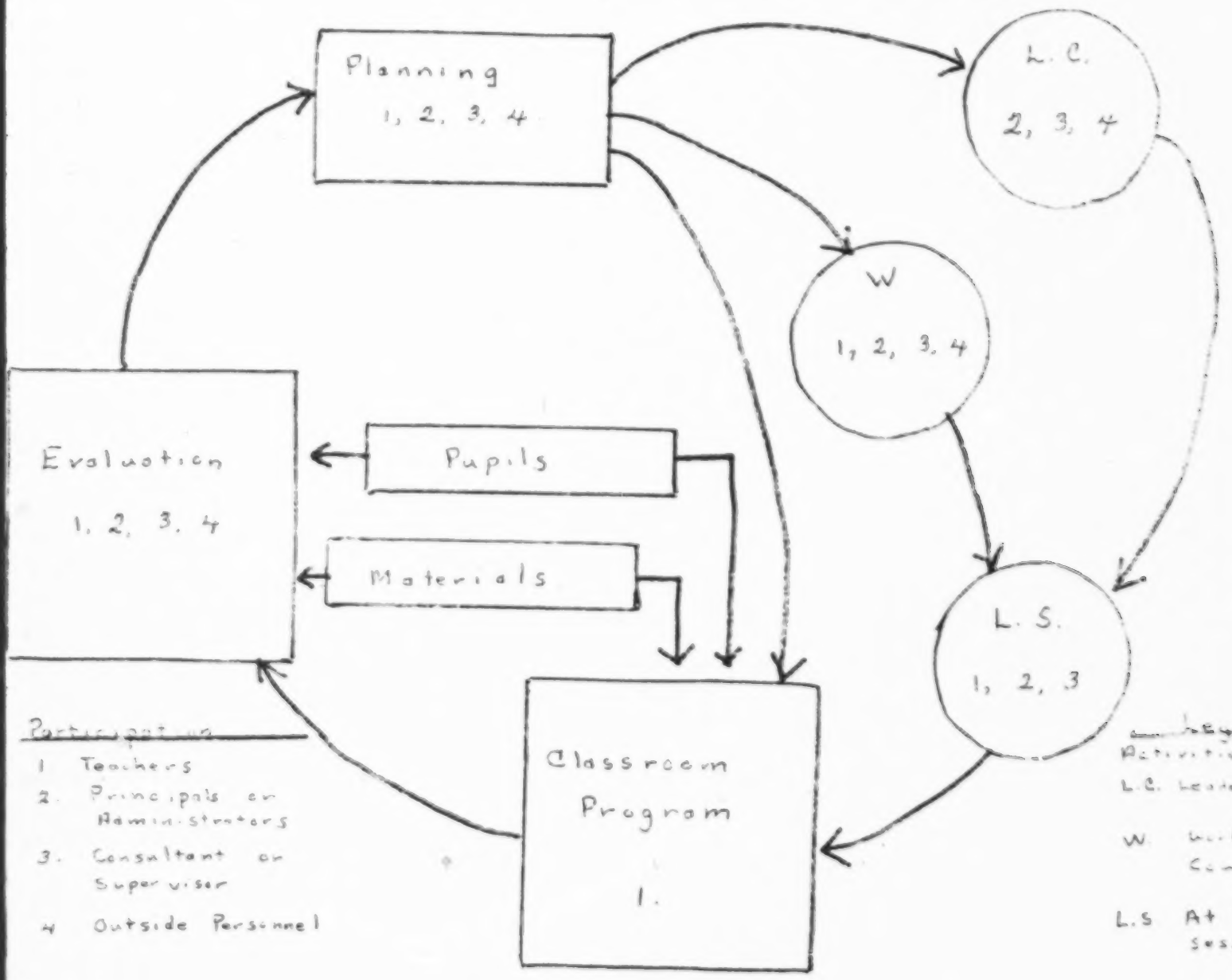
The process for the above program was reproduced from this article and appears on page 76 of this paper.

In order to give teachers the expertise needed to effectively update mathematics programs, the Nuffield Foundation commissioned teams to prepare teacher guides. The School Council was responsible for inservice training of teachers and this was begun in 1968. Teacher Centers were established, and the Nuffield Mathematics Centers were unusual in that they aimed to provide a relaxed atmosphere for the teachers who were already bone-tired from a hard day in school.

Courses were usually ten weeks in length, alternating afternoon and evening sessions so that some of the time was personal, and other was on a released time basis. The course was directed to and for teachers, and

33. Harold H. Lerch, Eliz. J. Bosclair, Teaching Mathematics in the Elementary School: What's Needed? What's Happening? Washington: Nea Publications (1970), pp. 93-94.

Inservice Elementary Mathematics Program



Participants

1. Teachers
2. Principals or Administrators
3. Consultant or Supervisor
4. Outside Personnel

Keyword

Activities

L.C. Leadership Clinic

W. Workshop Study Course

L.S. At Level sessions

the attendance of all the centers was more of sharing experiences and learning from one another.

As David Rappaport states:

> To hand the guides to teachers without adequate preparation and understanding of how the guides can be used could do harm as well as good. [35]

Observation of teachers proved this statement true. Where teachers were knowledgeable about Nuffield mathematics materials, success was evident. However, where teachers did not fully understand, success was nil.

In Carteret County Public Schools, Beaufort, North Carolina, a program in Inservice Training for Improvement of Curriculum, Organizing, and Instruction was funded for a three year period, 1968 through 1971. In the first phase, mathematics was the strong point, and while it continued to be emphasized, more of the thurst of the program was placed on strengthening and enriching the social studies curriculum.

In order to evaluate the program, Mathematics Diagnostic Tests for teachers and a Mathematical Attitudinal Scale were administered before and after the training. Before planning inservice training, teachers were surveyed to determine needs and desires.

Four inservice workshops involving 145 teachers were held in the spring of 1969. During the summer session, mathematics flow charts were developed for grades one

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35. David Rappaport, The Elementary School Journal, The Nuffield Mathematics Project, Vol. 71, No. 6, Chicago: University of Chicago Press (March, 1971).

through eight. Committees were chosen to prepare these charts, and also to review and select materials to recommend for Carteret Public Schools. Planned activities included an objective to develop inservice training for teachers that would meet their needs, and, by helping them to increase their own competency, student achievement would increase.

The social studies component began in February of 1970 and was to continue throughout the semester. Methods used were video-tape, visits, and observations.

Results of the post tests showed increased mathematical knowledge, with a marked increase on the middle grade teacher level. Instructors were pleased, and felt the program had been a success; teachers reacted favorably.

Polk County Public Schools in Des Moines, Iowa, began the project IMPACT (Innovation and Motivation in Polk County for the Advancement of Creative Traching) in 1967. This was a cooperative inservice education program which linked the resources of local schools, the intermediate unit, and higher education. Based on the realization that the future education of this country is hinged upon the teacher, he must be given every opportunity to examine and evaluate his own performance and all the tools available to him.

Two phases of the program involved a series of two day workshops for teachers and administrators and a six week summer session. The objectives of these sessions were to humanize education, to teach for thinking, and to

raise the level of teacher and student self-concept.

A related project, the Mitchellville Program in Southeast Polk School District, in a five month inservice program, concentrated on pupil-team learning, process groups, motivation, teaching productive thinking, and effective classroom questioning techniques. These teachers met twice weekly and Project IMPACT assisted by providing materials and staff members.

Project IMPACT also gave assistance to the Panor-Linden Program whose faculty carried on an inservice program in group dynamics.

The Des Moines Catholic Diocesan Schools Program in August of 1969, held a week long workshop in five instructional areas. IMPACT staff was available and the fifty Catholic School Teachers who attended were to conduct inservice meetings upon their return to their respective schools.

Other programs assisted by IMPACT staff members, and whose objectives were to humanize education while concentrating on teaching for thinking, were the Adel and Ballard Programs, the Blockhurst and Jansen Program, and the Des Moines Program. All of these programs were carried out through the 1969-1970 school year.

An evaluation of these programs disclosed:

> As the amount of IMPACT training increased, the amount of divergent and evaluative thinking increased. As the year progressed, continually

> more class time was spent in exploring novel, unusual, or imaginative approaches, as well as in judging and evaluating ideas and alternatives. Children did more evaluative thinking in all subject areas, either using value dimensions already given, or developing their own value system. 36.

Ralph C. Norris, Superintendent of Polk County Board of Education alleges that:

> ...IMPACT is a unique approach which combines what already has been discovered with an adventuresome search for even more effective ways to improve the teaching and learning process. 37.

In an attempt to give teachers the opportunity to acquire techniques, knowledge, skills, and application of them a Practical Arts for Elementary Teachers project was provided by the Florida High Priority Education Project. As in all inservice programs, it is the pupil who must be the final benefactor, as stated in this report:

> Planned and organized practical arts experiences can help motivate pupils to read, write, compute, visualize, and relate to academic subject areas. 38.

The project will provide an opportunity for selected potential elementary teachers, and will include a specific evaluation procedure to determine behavioral

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36. _____, Project IMPACT, Reports for 1968-1969 Polk County Public Schools, Des Moines, Iowa, Washington, D.C.: Office of Education (1969), p. 25.

37. Ibid., p. 28.

38. _____, High Priority Education Project, Tallahassee, Florida: Florida State University System of Florida (April, 1971), p. 112.

changes in the cognitive and affective domains, attitudes of participants in regard to the use of the interdisciplinary approach, and information from regular classroom teachers as to the usefulness of the interdisciplinary approach.

In an attempt to reach teachers isolated by geographic barriers characteristic of Northern New England, an inservice television series in reading techniques was conducted. This series was followed by an art, and then a science series. It reached over six hundred elementary teachers who sought to improve and develop knowledge and skills in reading and language arts. Fifteen instructional programs were produced and televised by WENH/TV, New Hampshire.

An evaluation form served as a means of examining the status of elementary reading instruction in New Hampshire, and was used as a basis for program recommendations. Consultants held meetings with participants to discuss tapes and lessons they had been using, and classroom follow-up activities. It was thought that this series had a decided effect on teachers who lacked training and modern materials.

Initiated in the Spring of 1968, The Saturation English-Reading Inservice Project was designed for English teachers teaching two or more English classes in Los Angles mid-city junior and senior high schools. Objectives of this project were to investigate the reading process to determine why students read or fail to read, improvement of reading skills in English classes, and demonstration and familiarization with techniques,

materials, and methods which will produce results.

The project was organized in six sections with scheduled meetings throughout February, March, April, and May. Staff members included a reading specialist, operations consultant, and curriculum development consultant.

At the first meeting the first hour included a demonstration, lecture, and familiarization of materials. During the second hour lesson plans and teaching materials were constructed. The third hour was given to discussion on the workability and adaptability of materials, and a sharing of ideas.

More than two hundred teachers and twenty-eight counselors participated in this project.

As a result of this program many lesson plans were prepared and put into book form. There was a definite contribution to the teaching effectiveness and professional growth of participants. All involved saw the need to invite students to receive reading instruction, and provide tutoring experiences for the participants.

Because of this program, teachers indicated a desire to be taught basic reading skills which could be used with any class. To help with this need, Projects in Remedial Reading were held between June 17 and June 28 of 1968. One hundred and twenty teachers attended, and one hundred and twenty students were available for tutoring experiences for the participants.

Participants felt that they had received significant help in effective teaching, and had realized professional growth in themselves.

The success of these two programs prompted a third one, Reading Skills Instruction Program, conducted during May and June of 1969. Workshops were held on four Saturdays during May, followed by six days of intensive tutoring during the last week of June. The purpose of the program was to train teachers so they could improve pupil achievement in basic reading skills, improve study habits of pupils, and develop in pupils a favorable attitude toward school.

Pupil participation provided tutorial experience for participants, and all involved benefited.

In a paper presented at the Convention of the International Reading Association in California, Mel Wiseman said:

> Teachers and students worked -- sometimes together, sometimes separately -- and learned about the reading process, about the skills involved in its mastery, and how, by working together, the task of teaching reading skills becomes easier for the teacher and more meaningful for individual students. 39.

A six week workshop was held at Cortland College in New York City for thirty-seven high school English teachers. Contents of the program included the nature of

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39. Mel Wiseman, Paper presented at the Convention of the International Reading Association in California, pp. 10-11.

linguistic studies, and the application of linguistics and rhetoric to composition.

The follow-up program included school visitation and a one day conference. School visitation was made by Institute staff members to participants' schools within a hundred mile radius of the college. An important aspect of the program was the close contact maintained with the participants. This contact motivated the participants to show the influence the Institute had on his teaching. Interest in the Institute was kept alive by means of a newsletter.

Visitation and the one day conference showed that the Institute was responsible for some change in teacher behavior and attitudes. In most cases, effective implementation of at least some of the summer's findings was achieved.

Western Washington State College conducted an Institute to improve the teaching performance of twenty junior high school teachers assigned to teach developmental reading. The seven week summer session included four reading courses: Individualized Reading Instruction, Improvement of Reading in the Secondary School, Observation and Practicum in Teaching Reading at the Junior High Level, and a Seminar in Reading Education.

During the practicum each participating teacher met with one or two children one hour daily for a five week period. The child's reading needs were diagnosed, and instruction was planned to meet his needs. Seminars

followed tutoring sessions with discussions and a sharing of ideas.

During the academic year, monthly seminars were held, and two college supervisors and four reading experts were available for guidance.

Participants felt there was a definite advantage to a year long Institute. Many times the monthly seminar or the supervisor's visit was cited as reasons for change in their teaching behavior.

An important point was emphasized during the program: teachers' desire to be supervised, not to be told they are good or bad teachers, but to be directed in improving their teaching behavior.

Dundalk Junior High School offered an inservice program in Content Area Reading. The instructor was a reading teacher from the school who conducted fifteen two hour weekly sessions. The object of this program was to have experienced teachers develop, administer, and evaluate reading skills materials in the various content fields. The final end of the course was to make teachers knowledgeable in teaching reading skills.

The program included guest speakers, intensified professional reading, and group and individual projects. It was suggested that a practicum type course would better enable teachers to diagnose and correct specific reading disabilities.

In Bedford, Massachusetts, an inservice program was designed for teachers of grades one through twelve on Sex and Family Living Education. It was the intention of the program to make sex and family living an integral part of the student's educational experience. The program was conducted by means of films, lectures, and tapes which were followed by discussion and questions.

Project Probe sought to improved social studies teaching by ascertaining the background and needs of social studies teachers. This study indicated a dire need for local workshops. An inservice program, Strategies for Social Studies, was conducted at Arlington Heights, Illinois. This inductive program balanced theory and practice that could be transferred to classroom use. Participants included twenty-seven teachers, three principals, four supervisors, and three curriculum directors. An evaluation of the program indicated that it was an effective instrument in changing teacher behavior.

D. NATIONAL SCIENCE FOUNDATION

Teachers have been ill-prepared to meet the needs of new science, with its rapid advances in both knowledge and technology.

> If we can continue to improve the teachers' effectiveness in presenting science to children, we can improve the products of the educational enterprise. There we can improve our scientific-technological society. 40.

40. W. T. Habahm, Summative Report: The Innovative Science Training Program, Elks Grove Training and Development Center, Washington, D. C.: Office of Education (June, 1969), p. 12.

In an effort to meet the needs of all staff members involved in the teaching of science, numerous programs were funded under the National Science Foundation. A resume of some of these programs follows.

The Southwest Regional conference was responsible for a series of workshops held in Kansas.

Flint Hills Elementary Project provided sixth, seventh, and eighth grade teachers with Institutes over a three year period. The workshops were utilized to introduce science curriculum materials. The project also provided inservice help and consultant services to other teachers in the area.

The NSF-CCSS Institute in Earth and Physical Science designed a program to improve science instruction by familiarizing with Earth Science Curriculum Project and Introductory Physical Science materials. This project proposed to introduce the rationale and use of AAAS materials during the summer of 1969 and to implement these materials in the classrooms of thirty-five first and second grade teachers and principals in the Flint Hill Association.

Another program was developed by the University of Colorado State Department of Education to aid school districts to initiate and develop curriculum change in elementary school science. The major thurst of the plan was to provide inservice education for elementary school teachers during the time when they begin to use one of the new elementary school science programs with their pupils.

With the available personnel, it was impossible to provide this service for all teachers. Therefore, a key group of teachers received intensive preparation in the general approach to be used. In turn, this pivot group was to train other teachers.

The program was begun in the fall of 1967 with twenty-five teachers, and the inservice class was focused on Elementary School Science materials. At the same time twenty-five teachers from Colorado Springs were introduced to the AAAS materials. During the second semester these same teachers worked in the second phase of the program. Released time from teaching was given for approximately six days to enable them to attend inservice classes.

During these inservice classes, experienced teachers taught while Institute participants observed the activities. Immediately following these demonstrations was a discussion and analysis of the teaching that had taken place. The focus of what teaching really is with the opportunity of analysis and evaluation were the key aspects of the second semester evaluation. During this semester teachers also received classroom assistance. While they were teaching, members of the project visited them and aided them in the use of materials.

For eleven weeks, a team of experienced teachers taught and demonstrated classroom procedures. The team spent the morning working with the teacher in the classroom. Video-tapes were made for review and analysis.

Phase three of this program was a two week full time session for all fifty members. In so much as this was the first time the groups were together, it provided an opportunity to witness a slightly different approach. The major thrust of the two week session was to prepare a three hour course which they would use to teach other teachers in the fall. These groups had an opportunity to try different facets of learning with small groups of teachers. They also took part in laboratory oriented classes which were designed to build up science background.

By the end of the summer, approximately fifty people had been involved in an intensive training program which prepared them to provide such training for other teachers.

Inservice education, during phase four of the program was provided by utilizing the manpower that had been trained during the previous year. In the fall of 1968, over three hundred teachers were able to participate in inservice classes and classroom consultations by fifteen instructors selected from the group of fifty persons trained during the summer.

Classes which met after school hours included observation of classes taught by the instructor. The fifteen instructors were released from classes for eight days during the semester to visit the classrooms of those they were instructing. By making use of released time in this way, they were able to give much assistance in the use of materials.

An evaluation of this program showed that a group of key teachers had been selected, extensively trained, and given the experience of providing inservice education for other teachers. Three districts have a group of exceptionally well trained teachers able to provide continuous inservice education within the district. Because of this program a large number of teachers have received a good introduction to a new science program. Phase four provided the basis for expanding the project to other school districts. However, it must be stated that while teachers must be provided with the help they need in making use of new materials, it is the principal and teachers of a given school who play the essential role in implementing change.

The Cooperative College School Science Program held an intensive four week workshop in Boulder, Colorado. Attendance included participating teachers, state and local science supervisors, and the college consultants responsible for the inservice portion of the program.

All participants were given an extensive exposure to materials and philosophies. The summer program featured large group lectures and demonstration sessions conducted by experts in the field, small group sessions in the laboratory working under the direction of an ESCP teacher, weekend field trips, and time for independent study and informal seminars.

Teachers, college consultants, and supervisors met to develop tentative plans for a follow-up program to take place during the school year. The inservice

portions were designed to permit flexibility to meet the specific needs of a school district.

During the school year inservice groups met every two weeks to discuss problems encountered, and to exchange experiences and suggestions for presentation of materials from Investigating the Earth. Coordination of inservice activities was provided through the summer workshop, planning by correspondence with the ESCP staff, a CCSS information bulletin, and a conference of inservice college consultants and ESCP staff. Throughout the school year college consultants visited each school that was involved in the program.

One notable feature of this program was the continual change and readjustment of both the initial and in-progress programming which had resulted from frequent evaluation debriefings by the staff. Successful in attaining its main objective of effectively introducing Investigating the Earth Science into school systems, the program received an onverwhelmingly favorable response from students, teachers, school supervisors, and college consultants. This may be attributed to the fact that teachers were in contact with higher supervisory personnel and effectively involved in curriculum planning, and summer workshops were designed to teach the teachers in the manner in which they were being encouraged to teach.

Participants felt that the crowded schedule tended to rush post laboratory discussions, and that there was not sufficient time for out of class study. It was decided that an Institute of six or eight weeks with an emphasis on field trips would be extremely effective in initiating and implementing curriculum innovations.

An Innovative Science Training Program was held at Elk Grove Training and Development Center in Illinois. The program focused on developing a model to be used for inservice training. This model was to be used by school systems planning science improvement programs. An attempt was made to meet the individual needs of schools seeking the services of the program.

Participants were classroom teachers from kindergarten to eighth grade level, science supervisors, curriculum directors, and building principals. The program included demonstration classes illustrating the process approach in elementary science, seminars on the process approach, and training programs designed to provide the teachers and administrators with opportunities to learn and practice the process approach.

During 1968 and 1969 five programs varying in length were developed. Four of these programs were designed to prepare teachers for leadership roles in planning and conducting inservice training programs. Two programs were planned for the summer session.

Participant response was most positive to general sessions conducted by outside consultants, and staff presentation which utilized a multi-media approach. There was an expressed desire, from summer participants, for an on-going, inservice program during the school year.

A five week summer Institute for thirty-five teachers and administrators was held at Kansas State Teacher's college. This Institute provided an excellent

opportunity to involve teachers in research techniques and interpretation of data relevant to teaching. The summer Institute was held in the Science Building on the Kansas State Teacher's College and in the Butcher Elementary Campus School.

Participants worked in experimental stations which had been set up to encourage them to work on AAAS exercises which required individual process skills. They also observed and worked with four afternoon classes at Butcher Elementary. Behavorial objective concepts were reinforced by micro-teaching activities.

During the academic year, twelve half day workshops were conducted which enabled teachers to compare notes, discuss problems, and receive encouragement from one another.

An inservice teacher education program was conducted to develop and evaluate science curriculum for Science, A Process Approach. It provided content for the training program which makes use of video-tape self-study programs, text materials, and classes in which teachers use AAAS materials.

On the basis of pretest assessment, teachers were placed in four instructional groups with one group serving as a control group. At the end of the 1968-1969 school year, attitude and achievement tests were administered and results indicated that the IN-STEP approach is an effective method of inservice training.

An elementary science and mathematics project to develop programs which would lead to the improvement of teaching science and mathematics from kindergarten to eighth grade was held in Kansas.

In the summer of 1968, thirty-five participants attended seminars, lectures, and demonstrations, and were involved in teaching elementary school children. SCIS science materials and Nuffield Project mathematics materials were used. During the 1968-1969 school year visitation of participants' classrooms was made and inservice workshops were held for teachers in the building. In the summer of 1969, five additional workshops of two weeks each were held.

Because of this program a closer relationship between university personnel responsible for preservice teacher training and Kansas Department of Education was established. The Kansas School system became more aware of the science curriculum, twenty elementary school science programs were established, and undergraduate preservice programs were revised.

At San Jose State College in California a two week workshop was followed by six five week, three hour weekly, sessions alternately scheduled for science and mathematics. Through activities, teachers were to learn the nature of inquiry learning for science understanding. It was an attempt to assist teachers in designing and conducting inquiry centered science lessons at the child's level.

Staff members gave demonstrations for learning activities. Participants taught two inquiry activities

to peers which were later evaluated by the group. Supervision of classroom teaching was followed by teacher self-evaluation and the college supervisor's appraisal. In direct relation to this evaluation, modification of style and subsequent exercises were designed.

By testing out and perfecting skills he had learned, the participant was able to continue his own inservice training. When confident in his ability, he was expected to share his learnings in his school. Resource teachers conducted workshops for teachers in their school districts, and many planned continuous programs for their schools.

Participants appreciated the enthusiasm expressed by the college staff in regard to their efforts in implementing change.

In the 1969 financial year the National Science Foundation awarded grants totaling $5,596,241 to improve the teaching of science and mathematics with the plan that colleges would provide the expertize needed in training teachers to implement new science and mathematics work in elementary and secondary schools. Included in this program was subject matter background, teaching skills, and methods of incorporating new materials and curriculum into schools. One hundred forty-six projects involved 7,000 teachers in forty-three states. One-third of these were geared to the elementary school level, and two-thirds to the secondary level. Content covered mathematics, computer science, physics, biological and earth science, and social sciences. The following institutions were involved in this program with summer

Institutes in the summer of 1969 and follow-up sessions during the 1969-1970 school year.

ELEMENTARY LEVEL

Florence State University involved thirty-four teachers and principals from Tuscumbia School System.

Spring Hill College, Mobile, Alabama, involved twenty-five teachers from Alabama and Mississippi in a mathematics program.

Arizona State University held a mathematics program for forty-seven elementary school teachers.

Southern State College in Arkansas held an elementary science program for teachers of grades four through six.

California State College's program emphasized training in the use of materials.

University of California, Berkely, had a program to initiate and implement SCIS science curriculum.

Darthmouth College, New Hampshire, provided training in ESS science material.

Newark State College, New Jersey, provided training in new science programs.

Stevens Institute of Technology, New Jersey, provided an analysis of materials and expanded their use.

Hofstra University, New York, provided training in objectives, activities, and specific processes.

St. John's University, New York, included training in new science program.

State University of New York's program provided training in new curriculum materials and provided for supervision of pilot programs.

Syracuse University, New York, had a four week advanced training session and methodological approaches in the Madison Project Materials.

East Central State College had a program extending for twenty-three weeks.

Southwestern State College had a program of instruction in the use of SCIS and SSS materials.

Eastern Oregon College was involved in a program for training in AAAS science materials.

Portland State College conducted a program on science materials using AAAS materials.

Kansas State Teacher's College studied AAAS science materials.

Nicholis State College conducted special training courses to improve mathematics instruction.

Northwestern State College held a program which involved the study and use of science materials.

University of Maryland was involved in an inservice program to acquaint teachers with the University of Maryland Mathematics Project materials.

University of Massachusetts conducted a program to study elementary school science.

Central Michigan conducted a study of mathematics content in order to train mathematics specialists.

Michigan State University conducted a program to study content and methodology of new science SCIS.

Mississippi State College for women conducted a study of AAAS materials to prepare teachers to use it in their classrooms.

Webster College conducted an elementary school science and mathematics program which involved a complex of teacher training activities.

University of California conducted a program to prepare teachers to implement SCIS materials in the Berkely Schools' primary grades.

University of California conducted a program to complete orientation and subject matter training in mathematics.

University of California, Los Angeles, conducted a program to study elementary school science.

University of Illinois conducted a mathematics training program.

University of Colorado conducted a program to train teachers in new science materials.

The American University, Washington, D. C., conducted an elementary science program.

George Washington University held a program for the orientation of teachers to new science curriculum.

University of Georgia conducted a program to study materials and devices to improve mathematics teaching skills.

Northwestern University conducted a program to initiate and implement new science materials.

University of Illinois conducted a program to train teachers in new mathematics content and materials.

Webster College, St. Louis, conducted a mathematics teacher training program.

Mt. Mercy College conducted a program to develop a corps of key teachers who will assume leadership in implementing new science curriculum.

Morris College held an Institute to study the basic concepts of set theory, structure and basic properties of the real number system in geometry suitable for elementary school.

South Dakota State University conducted a program to enable personnel to receive summer training to enable them to conduct inservice training in pilot schools.

University of South Dakota's program gave basic science training in the use of materials and concepts.

East Tennessee State University conducted a mathematics training course to enable teachers to serve as mathematics resource people.

North Texas State University conducted a program to implement new science materials.

University of Houston's program conducted a study of science materials.

University of Utah conducted a program to develop mathematics teachers who will serve as resource people.

College of William and Mary conducted a mathematics program to train teachers in content and methodology.

University of Wisconsin conducted a program to create a trained cadre of teachers to function as Mathematics Resource People.

University of Wisconsin, Waukesha, offered training in elementary school science.

SECONDARY LEVEL

The University of Arkansas had an Institute in Biology to train teachers in BSCS materials in order to improve their academic competency and teaching effectiveness.

Troy State University, Alabama, conducted a Biological Science Curriculum study to improve instructional study in individual schools.

California State College conducted an Institute in Physical Science. Teachers received academic content

University of Southern California held an Institute in mathematics which involved a study in calculus to strengthen the Los Angeles Advanced Placement Calculus Program.

United States International University's Mathematics Institute provided teachers of low achieving students with methods to promote their interest.

Colorado State College conducted a Physics Institute to provide training in Harvard Project Physics and assist in implementation in schools.

University of Colorado's Biology Institute enabled participants to receive training and classroom experience in BSCS materials.

University of Colorado held an Engineering Institute. Participants were familiarized with Engineering Concepts Curriculum Project materials.

University of Colorado held a Computer Science Institute. Teachers were instructed in computer related mathematics, and in the instructional use of the computers in the classroom.

Western Connecticut State College held an Earth Science Institute to introduce ESCP materials and laboratory approaches.

District of Columbia Teacher's College held an Institute in Multiple Science. Twenty persons were trained as technical assistants in the schools, and teachers gained experience in using technical assistants.

Howard University held a Physical Science Institute for training in IPS with opportunities to observe and teach IPS under guidance of experienced teachers.

Florida Institute of Technology held an Institute in Extra Classroom Research Activities. Science teachers engaged in research activities in the summer

and training in Introductory Physical Science materials.

Chico State College's Institute in Secondary School Mathematics sought to improve knowledge of mathematics content, and the ability to present it.

College of Notre Dame conducted a Sociology Institute to upgrade qualifications of teachers in sociology and to implement new curriculum materials.

Fresno State College's Institute in Earth Science prepared secondary teachers to introduce earth science courses in their schools.

San Diego State College's Mathematics Institute provided teachers with subject matter to increase their competence and confidence in teaching mathematics.

San Diego State College also held an Economics Institute to improve the teaching of twelfth grade economics.

Stanford University's Institute trained high school teachers in research methodology by participating in science research programs.

University of California held an Institute in Junior High School Science to study space and physical science.

University of California held a Mathematics Institute to complete the orientation and subject matter training of teachers in new curriculum.

University of Santa Clara's Mathematics Institute was for the improvement of mathematics curriculum through the use of unique problem solving exercises for more capable students.

University of Santa Clara conducted an Institute in physics. Teachers received training in content and methods of Harvard Project Physics.

and supervised student research activities during the year.

University of Florida held a Multiple Science Institute. Participants used instructions and developed skills for training educationally disadvantaged children.

University of South Florida held an Engineering Institute. Teachers were prepared to teach the course, "The Man-Made World".

Emory University conducted an Institute in physics to study the Harvard Project Physics Program.

Oglethorpe College conducted a General Science Institute for teachers to receive training in implementing new science.

University of Georgia conducted a Mathematics Institute to study UICSM materials.

University of Illinois, in cooperation with the State of Florida Public Schools, conducted a Mathematics Institute. Special training in UICSM materials was given.

Northwest Nazarene College conducted a Physics Institute for training in subject matter and laboratory methods.

University of Idaho conducted a Physical Science Institute. Teachers received training in physical science and IPS curriculums.

Greenville College in Illinois conducted a Physics Institute in a statewide effort to increase the quality and quantity of physics instruction.

Illinois Institute of Technology held a Mathematics Institute. Special selected materials were demonstrated and discussed with the teachers of inner-city schools.

Roosevelt University conducted a Physical Science

Institute. This was a continuation of a program to train teachers in the use of PS II and IPS materials.

University of Illinois conducted a Mathematics Institute involving inservice training of Philadelphia teachers, and assistance in implementation of UICSM materials.

DePauw University held a Mathematics Institute involving training in content and use of UICSM materials.

Indiana State University conducted a Physical Science and Earth Science Institute. Special training was given to introduce and improve junior high school courses in earth and physical science.

Asbury College held a Mathematics Institute in improved science laboratory instruction.

Louisiana State University conducted an Earth Science Institute to prepare teachers to provide inservice training for other teachers.

Louisiana State University conducted a Chemistry Institute to improve the chemistry program.

Northwestern State College held a Biology Institute in the study of BSCS Green Version and related teaching techniques.

University of Southwestern Louisiana conducted a Junior High School Science Institute to improve the science program and to help participants become resource persons.

Goucher College, Maryland, held a Computer Mathematics Institute. Participants were prepared to introduce computer related courses in Baltimore secondary schools.

Eastern Nazarene College conducted an Institute in instruction and laboratory training in ISCS Science.

Bridgewater State College conducted an Institute

in Earth Science and Geography to assist implementation of ESCP in the junior high schools and HSCP in the senior high schools.

University of Massachusetts held an Institute in Biology to study the potentialities and uses of greenhouses as teaching aids.

Eastern Michigan University conducted a Multiple Science Institute to study the integration of science courses.

Michigan State University held a General Science Institute for the implementation of new science.

University of Michigan held a Mathematics Institute to study mathematics topics and computer programming materials.

St. Cloud University held an Economics Institute to examine new economics education curriculum projects.

Mississippi State College for Women conducted an Institute in Biology to assist teachers in the use of BSCS materials.

University of South Mississippi conducted an Earth Science Institute where teachers were trained in methods and contents of ESCP materials.

Central Missouri State College held a Chemistry Institute in the modern approach to teaching chemistry.

Southeast Missouri State College's Institute in Chemistry gave instruction in the use of CHEM student materials.

University of Missouri held a Mathematics Institute. Instruction on computer science was provided.

Creighton University held a Biological Science Institute which provided teachers with classroom and field competence in natural science.

Drew University held a Computer Science Institute to explore improved teaching in courses involving the computer.

Eastern New Mexico University conducted an Earth Science Institute to instruct secondary school teachers in ESCP materials and methods.

New Mexico State University conducted an Engineering Institute for teachers to prepare and organize materials for use in the pilot program of concept oriented material.

Brooklyn College of the City University of New York conducted a Mathematics Institute to provide training in junior high school algebra, with development of detailed plans.

York College of City University of New York held a Physics Institute to train teachers in a physics program involving college, schools, and industrial resources.

College Center of the Finger Lakes held an Institute in Ecology with training in Ecology and its application in teaching New York State Biology curriculum.

State University of New York conducted a General Science Institute for instruction in ESCP materials.

State University College conducted a General Science Institute to study the inquiry approach.

Waldemar Medical Research Foundation, Inc., held a Biological Science Institute. Teachers were instructed in methods of research.

Duke University held a Physical Science Institute to train teachers in basic physical science.

East Carolina University held a Biological Science Institute to provide training in the special materials of the BSCS programs.

East Carolina University held an Earth Science Institute which developed pilot programs to improve subject matter competencies.

Ohio State University conducted an Earth Science Institute to improve earth science subject matter competencies of teachers.

Ohio University conducted an Institute in geology to study subject matter in earth science.

Ohio University held an Institute in economics for experienced teachers to study economics and economic courses.

University of Akron held an Earth Science Institute to study earth science courses.

Oklahoma State University conducted an Economics Institute. Instructional materials in economics were developed and integrated into social studies courses.

Temple University held a Physical Science Institute to provide training in the use of ISCS materials.

University of Rhode Island held an Institute in Computer Science to train teachers in computer science.

Austin Peay State University held a Math and Computer Science Institute to increase subject matter competencies of teachers.

Christian Brothers College conducted a Physical Science Institute to upgrade the teaching of physical science.

Memphis State University conducted a Physical Science and Chemistry Institute to increase subject matter knowledge, and to strengthen classroom presentations.

Memphis State University conducted an Earth Science Institute to prepare teachers to use new inquiry oriented earth science materials.

Vanderbilt University conducted a General Science and Social Studies Institute which was an extension of a previous program to develop and adapt new instructional materials.

East Texas State University conducted a Physical Science Institute to further training in physics, chemistry, and lab techniques.

North Texas State University conducted a Physical Science Institute to give special training in IPS materials.

University of Houston conducted an Earth Science Institute to study ESCP materials.

University of Texas at Austin conducted a Physical Science Institute which gave laboratory-oriented training in physics and chemistry.

University of Texas at ElPaso conducted an Economics Institute with special economics training.

West Texas State University conducted a Physical Science Institute to give instruction in textbook content of Physical Science.

Brigham Young University conducted a Mathematics and Computer Science Institute to train teachers in the details of integrated mathematics computer courses.

University of Utah conducted a Geography Institute to improve geography instruction in public schools.

West Liberty State College held an Earth Science Institute so that teachers could receive training in improved teaching of earth science.

West Virginia University conducted a Mathematics Institute. Teachers received eight weeks of work in pre-calculus mathematics.

University of Wisconsin conducted a Physical Science Institute to use and evaluate a revised curriculum.

University of Wyoming held a Chemistry and Physics Institute to improve teacher background.

University of Wyoming conducted a program specifically designed for the small rural high school teacher.

In addition to the above listed programs, others were held. In Montgomery County, Maryland, science workshops were conducted to provide teachers with necessary content background, and teaching strategies on the presentation of the inquiry method by example and practice. An experimental procedure was used to determine the most effective method for presenting new materials.

Group one received the materials and guide with no additional help. Group two received materials and guide, and were urged to seek consultant help when needed. Group three, in addition to what was given to the other two groups, was involved in a planned series of work sessions and exposed to the same laboratory experience the children would have. Needless to say, group three results greatly exceeded the results of groups one and two.

An intensive training program in Leadership was held at Colorado School of Mines. The conference was designed to prepare participants to teach IPS in their own classroom, and, at the same time, to conduct local workshops for their peers who were teaching IPS.

The program consisted of group work, film showings, testing, and major presentations held in a lecture hall. All other work was in a small classroom or laboratory. Group conferences completed the details of the local workshop which participants were to conduct.

Many good things were accomplished by the Institutes and workshops sponsored by the National Science Foundation. Many experienced teachers were given new insights into the inquiry method of teaching. In many instances the IPS local workshop was a first attempt at training teachers through their own peers, and within their own environment. When group activity sessions involved maximum use of manipulative materials and interaction among participants, much was gained. Participants reacted most positively to general sessions which included content material that was of practical value. Again it was noted that summer sessions out-valued academic year workshops in their effectiveness.

It seems that from later reports and evaluations that lasting effects, in some instances, were short-lived. Many times financial difficulties interrupted the progress. Inservice programs were plagued with interfering and conflicting activities. Many workshops suffered from lack of administrative cooperation. And, too, the human element of monetary gain was ever present. A 1969 report, from the Montgomery County Public School in Maryland, found it difficult to notice any lasting effect of the workshops.

It would appear then, that the key to success in any program is the cooperative support of both administrators and teachers.

NATIONAL SCIENCE FOUNDATION FELLOWSHIPS

National Science Foundation Fellowships and Traineeships for full time study or research are awarded

yearly and are limited to graduate and postgraduate study by nationals or citizens of the United States. Content area for these fellowships includes mathematics, physical, medical, biological, engineering, and social sciences in addition to the history of the philosophy of science.

Over a five year period the trend of United States' support for these fellowships has lessened considerably. The number of first-year fellowships available in the National Science Foundation Federal Program in 1967-1968 was 3,000; in 1968-1969, 3,061, in 1969-1970, 2,747, and an estimate for 1971-1972 was 1,000.

E. INNOVATIONS AND TECHNOLOGY

It is not possible to separate entirely the innovative practices and technology, for one is dependent upon the other for desired effectiveness.

To introduce and provide practice in innovative techniques, classroom behavior, and instructional materials, three teacher workshops were held in Alexandria, Virginia. In particular these workshops dealt with the development and use of instructional objectives and the implementation of them. A built-in component was practical experience from the previous school year which participants were urged to include in their presentations.

Additional workshops were conducted for administrative and supervisory personnel to enable them to provide support in implementing new techniques.

A follow-up program was scheduled to assist teachers in implementation and evaluation of classroom effectiveness. It was considered a very successful venture in inservice training.

Currently in Tallahassee, Florida, approximately 125 Leon County teachers are spending some portion of this summer in summer workshops. Twelve sessions, some lasting as long as thirty days, are being held. Topics being covered are elementary music, science, social studies, language arts, and reading curriculum. Another program is studying the best way to attack the problem of drug abuse.

The social studies program involves workshops on all three levels, elementary, middle school, and senior high school. Some programs will concentrate on updating teaching skills and program planning, while others will be concerned with developing materials.

One of these programs involves forty-five elementary school teachers and 950 pupils. This program involves an innovative approach to elementary education, which will more fully involve youngsters in their own education. It is hoped that this program will increase interest and performance.

The objective of this highly individualized program is to demonstrate the effectiveness of inquiry learning. The child is expected to emerge from a learning situation knowing something because he has realized it through personal discovery. Academic objectives for students are to upgrade their communication

skills, while teachers are updating teaching skills, program planning, and the development and use of new materials. Perhaps the most important aspect of these workshops is the opportunity for teachers to come together to question, to share ideas, and to discuss experiences.

In an attempt to offer teachers a planned, continuous education, the Scarsdale Teacher Association conducted an Institute. The general purpose of the Institute was "to offer current information on a variety of subjects, maintain an atmosphere of intellectual excitement, and throw full light on any problem or aspect of the world of immediate professional concern to teachers."[41].

The Institute, by means of questionnaire and a resource representative committee, is able to draw on rich resources of imagination, intelligence, and experience. Evaluation of this Institute showed a sense of harmony between teachers and the community. A high quality of course material had broadened the teachers' educational horizon and had made their classrooms a more stimulating learning environment. Again it was proven that a high degree of success is realized when teachers assume professional responsibility in planning and organizing inservice programs.

During the summer of 1970, a three day workshop was held at the University of Rochester to introduce the integrated day concept to American teachers. An

41. Doris G. Breslow, Vincent Dempsey, The Scarsdale Teacher Institute, Today's Education, (February, 1970).

integrated day makes use of the child's immediate interests and experiences as the curriculum starting point. There is an interaction of various media to excite creative expression. It is expected that the child will give a daily written account of his experiences.

The format of this workshop included a demonstration class where teachers had the opportunity to observe and teach in an integrated situation; classrooms were prepared to give teachers the same experiences that children derive from learning in an integrated classroom, and it gave teachers extensive freedom in regard to time and choice of activities.

Participants were gradually able to feel a sense of total experience and saw new learning emerge from the child's experiences, concerns, and interest. It might be said that a

> ...teacher in the integrated day classroom facilitates learning through his own sense of wonder, curiosity, and urge to explore and discover the world around him. 42.

Teachers were better able to understand the value of creative arts and their role in the integrated day classroom by observation of the demonstration class. In order to make the integrated day a reality, intensive workshops, support and guidance, are needed to make the transition possible.

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42. Alan Auskopf; Joy Moss, An Integrated Day Workshop, The Elementary School Journal, Chicago: University of Chicago Press (March, 1971).

To improve education in small schools, the Texas Education Agency holds annual week long workshops to update professional competencies of administration and staff. All schools involved in the project send representatives to the workshop. The theme of the 1968 program was, "Teaching ... Imagination Unlimited!". Opportunities for interaction among educators and information on the available resources, practical teaching techniques, and current curriculum materials was provided. The program consisted of interest group sessions, grouped according to grade level as well as subject matter and special interest. Administrators had buzz sessions where special consultants provided leadership. In addition to this, the program provides shared services and classroom visitation. Benefits derived by participants are evidenced by the number who attend this annual program.

In our technological society there is a need to have both preservice and inservice education in the work world area so that teachers will be able to present career development activities at all grade levels.

In light of this need the University of West Florida planned summer inservice workshops for elementary teachers to change the concept of the world of work, to make them more aware of the new aspects of the world of work, to develop an awareness of the relationship of economics to the world of work, and to increase confidence in economic knowledge.

Working under the basic premise that teachers are better able to plan and conduct inservice programs which

evaluate the curriculum materials needed for an application of these evolving technologies in the school system.

The 1969-1970 ExTFP sought teams of two or three teachers from the inner-city areas. It was hoped that the program would provide teachers with the skills and curriculum materials needed to teach occupational education to inner-city youth, and thus provide a nucleus of proficient teachers in industrial arts.

Eleven professional core course and methods courses were offered. Each Fellow selected one unit for in-depth study. Fellows worked throughout the year to develop individualized instructional packages for their area. Five hundred packages were produced and published. These were entitled Individualized Materials for Industrial Education. Field testing of the packages was done in the Detroit Public Schools.

This instructional program provided for joint activity with representatives of industry working with teachers from Detroit inner-city schools. An evaluation sowed that new materials and techniques were gained, and participants had a greater awareness of occupational information on technological advances and instructional methodology.

REGIONAL LABORATORIES

Regional Laboratories were created by the 1966 Elementary and Secondary Education Act. They were not to be laboratories in the traditional sense of a building or a series of buildings, but were to be a grouping of

minds to enhance and expand the positive effects of the teaching profession. Twenty of these groups were located around the country in an attempt to "blaze new trails in education." Even though a significant number of noteworthy projects have come into existence and are continuing to come about, news about the progress of these laboratories has been sparse.

In the initial stage of these laboratories, confusion was prevalent due to the uncertainty of their purpose and identity. Serious funding and staffing plagued them. In 1968 an evaluation was conducted, and, as a result, five laboratories were given six months to terminate their existence. These phased out programs were in the District of Columbia, Chicago, Detroit, Denver, and Little Rock, Arkansas.

Phasing out did not necessarily mean that the work being done at these laboratories was sub-standard. Some had not gotten off the ground, some concentrated on developments that were difficult to measure, some were funded less in the initial stage, and some had products which could not be measured.

In 1969 twenty-one million dollars were given to fund the remaining fifteen regional laboratories, who at this time had a better idea of what they were supposed to be doing. There now existed more inter communication between the laboratories, and each laboratory was now concentrating on the application and testing of materials in the classroom. Because each lab now worked on only a few development porjects, more in-depth investigation

was possible. In October, 1969

> ...four labs, in St. Ann, Missouri; Austin, Texas; Los Angeles, and Berkeley, California, received assurances from the USOE that they would be supported for the five years, through 1974. But there were two strings attached: the labs' continued high level of performance, and the availability of funds from one year to the next. 43.

A sampling of what has been done in these Regional Laboratories follows.

Upper Midwest Regional Educational Laboratory in Minneapolis studied behaviorally engineered classrooms in the inner-city. An inservice kit on language arts was prepared to update Los Angeles' teachers in the latest findings in their fields as quickly as possible. The kits contained multi-media material.

The Northwest Regional Educational Laboratory, Portland, Oregon, accented differences in the ways people learn and proposed a program which would permit students to move at different paces and different combinations of learning experiences. It provided continuing inservice educational programs, and had for its dominant concern the preparation of teachers for inner-city work.

The intercultural program was concerned with the development of language arts skills in children of different ethnic cultures. It involved children of migrant workers who were Mexican-Americans, and Eskimo

43. _____, "Whatever Happened to Those Regional Labs?" Grade Teacher (December, 1969).

children in a remote Alaskan Village.

The Laboratory acts as a broker and a developer in computer technology by field testing the use of computers, and by working on curriculum development aids, problem solving systems, instruction and administration management, and simulation studies.

The Regional Education Laboratory for Carolina, Virginia, and Durham, North Carolina worked on individualized prescribed instruction.

The Southeastern Educational Laboratory, Atlanta, Georgia, produced a set of ten lessons in Linguistic Science for Teachers to be used by classroom teachers during inservice training.

They are also responsible for a readimobile which consists of six mobile classrooms operating in six isolated rural school districts in five states. These mobile units are equipped with high interest level preschool materials.

The Southwestern Cooperative Educational Laboratory, Albuquerque, New Mexico, was responsible for an oral language program designed to improve the teaching of language skills to preschool and primary children with little or no facility in English.

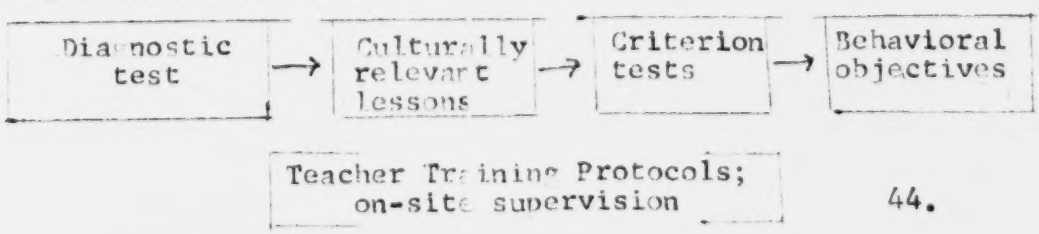
The first attempt at initiating this program failed because no teacher training had been given. During 1967 and 1968, basic and applied research was made and a revised version was put into eighty-seven classrooms for

testing. One task group had to find out as much as possible about the preschool child, and a second task group designed and implemented a plan for teaching teachers the necessary strategies. These strategies were based on modeling, conventions, maintaining responses, and correcting errors. During the summer of 1968 a two week Institute was held to train master teachers so that they could install the program, and, at the same time, train other teachers for the program.

In September, the program, called Mark I, was installed in classrooms. Laboratory supervisors observed classrooms on a bi-monthly schedule, and held periodic inservice meetings. These inservice meetings had a three-fold purpose: to obtain information, to explain additional research, and to maintain teacher competency. To further assist teachers, micro-teaching and classroom activities were observed and discussed.

Teachers have the freedom to reject materials of the Laboratory, and, at the same time, the Laboratory, if after taking corrective measures (workshops, micro-teaching) finds that teacher performance is still lacking, may reject the teacher from the program.

Mark II model, not completed at this writing, will look like this:



44.

44. James L. Olivero, Developing the Oral Language Program, Cooperative Educational Lab., Washington, D.C.: Office of Education (1970), p. 8.

The types of training needed will vary among individual teachers, but all programs will contain micro-teaching, cultural sensitivity, and instructional strategies. James Olivero states:

> Obviously, a development program of this nature is one in which flexibility and willingness to admit "failure" - - the reservation of the right to be wrong - - is essential... New data demands a new look, and sometimes new decisions. 45.

The plan assumes its objectives will be realized if teachers are aware of the effects of "diverse cultural backgrounds on English language learning"; if they make use of strategies and curricula based on cultural variables, use appropriate classroom management techniques, and familiarize themselves with the difficulties these children experience in a school setting.

Teachers involved in Mark I were expected to actively participate in Mark II Institute and inservice meetings. Follow-up supervision, information feedback, and evaluation of activities in various phases of the program were the objectives to be met.

A flow chart of the Education Center SWEL Installation Plan, reproduced from the report of James Olivera is shown on page 123 of this paper.

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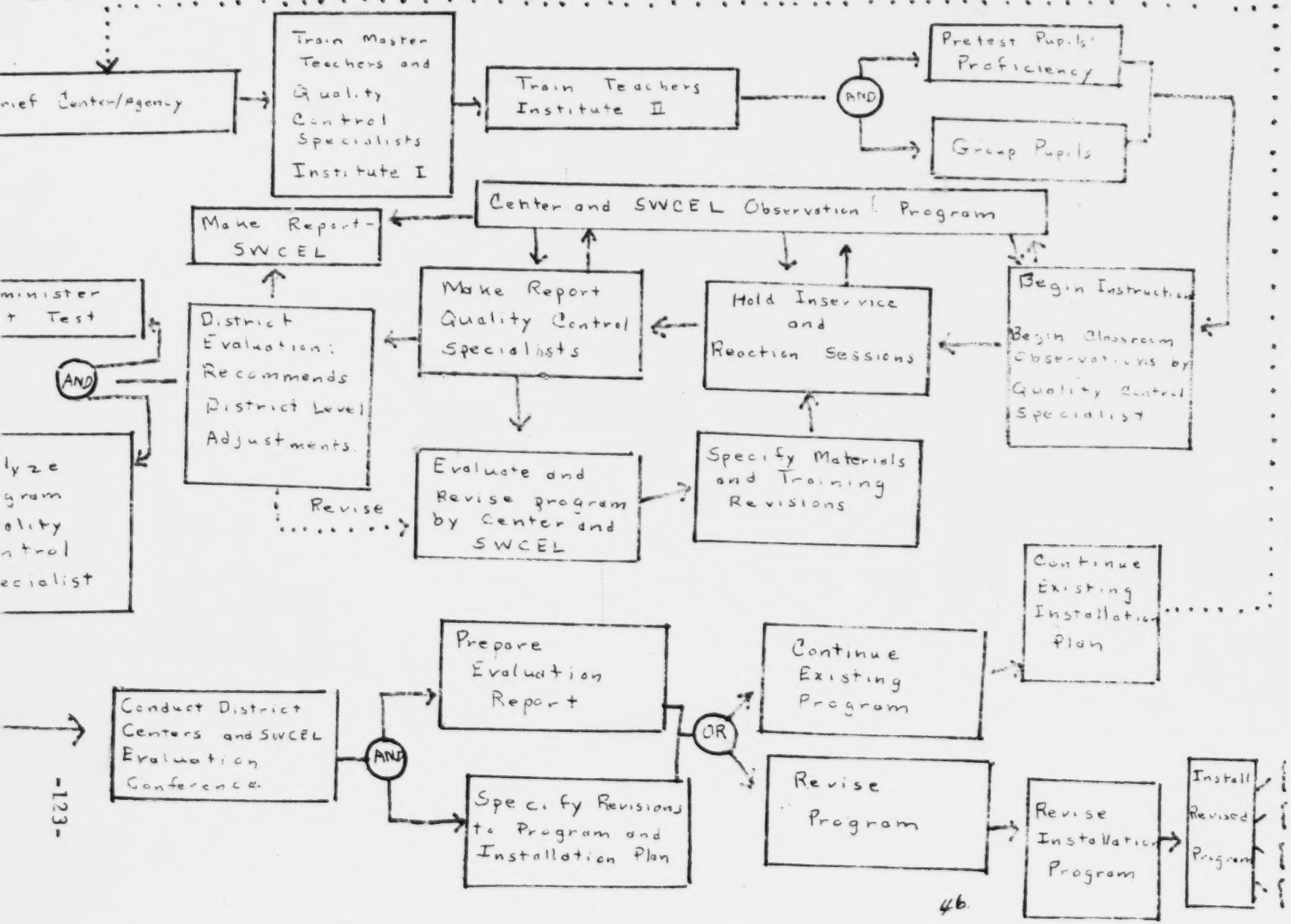
45. Ibid., p. 9.

Education Center SWCEL Installation Plan



The Southwest Educational Development Laboratory, Austin, Texas, based its programs on bilingual education, early childhood, parent involvement, and multi-cultural social education.

The Southwest Regional Laboratory for Educational Research and Development, Inglewood, California, made a study to determine teachers' use of instructional procedures. Results of observation study were used in devising teacher training methods.

The Education Development Centers, Inc., Newton, Massachusetts, conducted an early childhood education study based on the belief that teachers should be involved in shaping the places where they teach and the materials with which they teach.

The Center for Urban Education, New York City, created instructional files to help teachers. Forty cards, to cover forty school weeks, were to be used to plan weekly lessons.

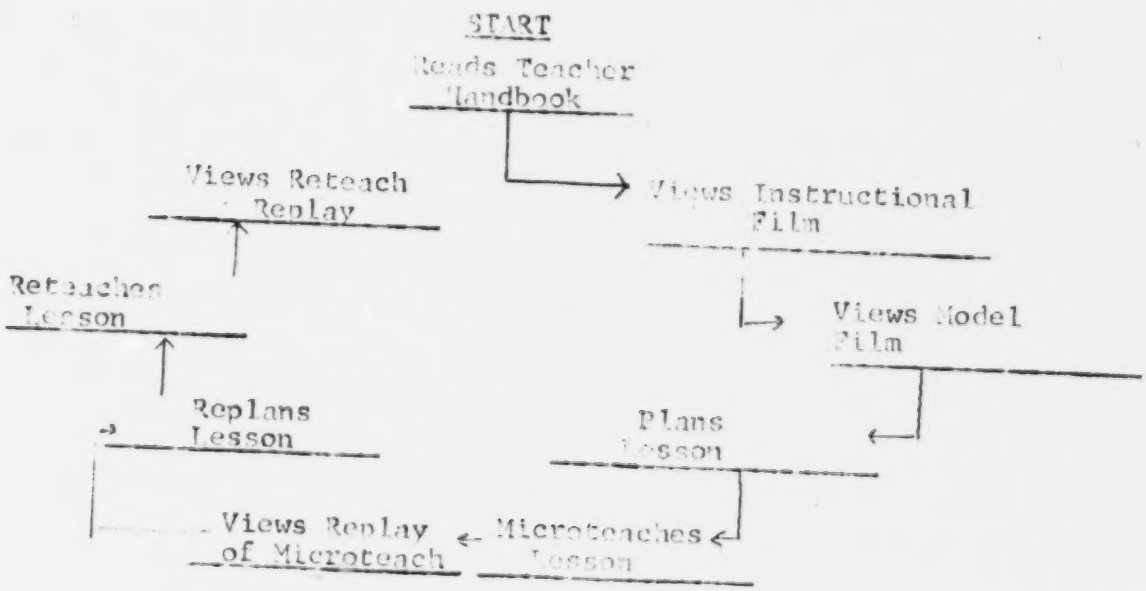
The Appalachia Educational Laboratories, Inc., Charleston, West Virginia, designed a program to offer rural children educational opportunities by organizing several contiguous school districts to combine resources.

The Far West Laboratory for Educational Research and Development, Berkeley, California, has released numerous products for preservice and inservice training.

Minicourses developed by the Laboratory's

Teacher Education Department are self-contained instructional packages dealing with teaching methods. A teacher views instructional and model films, micro-teaches and reteaches. Field testing of the minicourses has shown their effectiveness in improving teacher skills. The following diagram depicts the minicourse.

Teacher Activities During a Minicourse
Instructional Sequence



Information units are self-contained packages describing new developments which can be used in schools.

Confrontation is a human relations training unit which contains five filmed simulations of situations faced by teachers and administrators.

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47. _____, Brochure from The Far West Laboratory for Educational Research and Development.

The Elementary Science Information Unit may be used to help train teachers in making curriculum adoption decisions. It contains information on all current science programs.

Micro-teaching programs enable teachers to evaluate their own performance.

The Eastern Regional Institute for Education, Syracuse, New York, worked on a process oriented educational program. They considered the developing of the child's basic mental skills the most important need.

The Michigan-Ohio Regional Educational Laboratory, Inc., Detroit, developed an inservice teacher self-improvement program based on goal setting by the teacher, practice of new skills, feedback about teaching performance, and a self-analysis of teaching behavior. These programs were basically self-renewing. Lilburn P. Hoehn tells us:

> MORE'S rationale is that when teachers are provided accurate and appropriate feedback about the effects of their teaching, and when such feedback is tied to a set of improvement procedures, they will move closer to becoming self-aware, self-renewing professionals. 48.

In order for this program to be effective it is necessary that it be based on voluntary participation. Teachers and inservice leaders meet regularly and work together on professional improvement. As teachers become more aware of their behavior, they seek to be observed, and become self-regulatory.

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48. Lilburn P. Hoehn, Teaching Behavior Improvement Program, Michigan-Ohio Regional Educational Laboratory, Inc., Washington, D. C.: Office of Education, (July, 1969).

Response at the end of the program showed improved teaching behavior and strategies. In effect, improved teacher strategies and procedures were of prime importance in leading to improved and increased student learning. A flow chart of the Improvement Strategy, reproduced from this report follows:

THE IMPROVEMENT STRATEGY

THE PROCESS		THE TOOLS
Step I	Seek Goal Statements	
Step II	Collect and order data	Interaction Analysis - Video-tape, Student feedback, Audio-tape, Naturalistic Observation
Step III	Analyze and Interpret Data	Interaction Analysis, Video-tape, Student feedback, Audio-tape, Naturalistic Observation
Step IV.	Select behavior to be changed and plan improvement strategy	Technical Teaching Skills Video-tape Audio-tape
Step V.	Practice Behavior and Analyze Practice Session	Micro-teach - Role Play Behavorial Objectives Classroom Practice Student Feedback
Step VI.	Trial in the Classroom	Interaction Analysis Video Tape, Student Feedback Audio-tape, Naturalistic observation
Step VII.	Evaluate, change and plan next activity	Interaction, Student Feedback, Audio-tapes, Video-tape, Naturalistic Observation

49.

49. Ibid.

The Central Atlantic Regional Educational Laboratory conducted a two year program on Arts and Humanities for Young Children. In this program, which was innovative in scope and content, forty-seven teachers were prepared to teach the art component. The first requisite to this program was the preparation of classroom teachers. Summer workshops and bi-monthly seminars served to produce more active inner change of ideas, and willingness to share materials produced by the children. Teachers were more eager to try out another's strategies, and to criticize unworkable strategies.

Off to an excellent start in instilling a love for creativity, this program was discontinued due to lack of funds.

TECHNOLOGY

Technology has infinite potential in assisting teachers to become professionally competent. There is a divided field in technological use in the classroom, for there are as many advocates for its use as there are against its use. Perhaps the prime factor in any innovation, be it of a technical or practical nature, is the interest area of an individual or a group. Loss of interest in any area can be a disaster, for without interest there can be no meaningful inservice work, or instructional median.

Some innovations require acceptance or rejection by the entire school or system, and give very little freedom of choice to the individual. Others permit individuals to accept or reject innovations independent

of group action. Opportunities should be provided for interested teachers to participate in evaluating and selecting equipment and materials. There is a need for freedom: freedom from unreasonable regimentation, freedom to explore new ways and to achieve mutual goals. Here, inservice programs can provide teachers with advice and suggestions to enable them to handle innovations.

It is the responsibility of teacher educators to know the uses and limits of technology, and make use of it in order to achieve educational goals. Preservice education cannot last a lifetime, but must be followed by a continuing program of inservice technological education. Use of technology can effectively be considered in updating inservice educational opportunities. Therefore, it is essential to conduct research in media and instructional techniques for the continuing performance of teachers.

Effective inservice programs will be those which give the teacher the tools, skills, and techniques which he feels are the right ones. Successful programs will motivate the teacher to spend extra time and effort to upgrade or change his instructional practices. The importance of audio-visual workshops cannot be ignored. Because of the inability to run machines, many teachers do not use them. Some media is being used as time fillers, thereby losing its value as a learning tool. This proves that misuse of materials can be just as harmful as not using them at all. It is important that materials be appropriate to current teaching.

In order, then, to assure educators to meet emerging needs, "...we must make the inservice training process as efficient as possible in light of the constraints of human and technological capabilities.". 50.

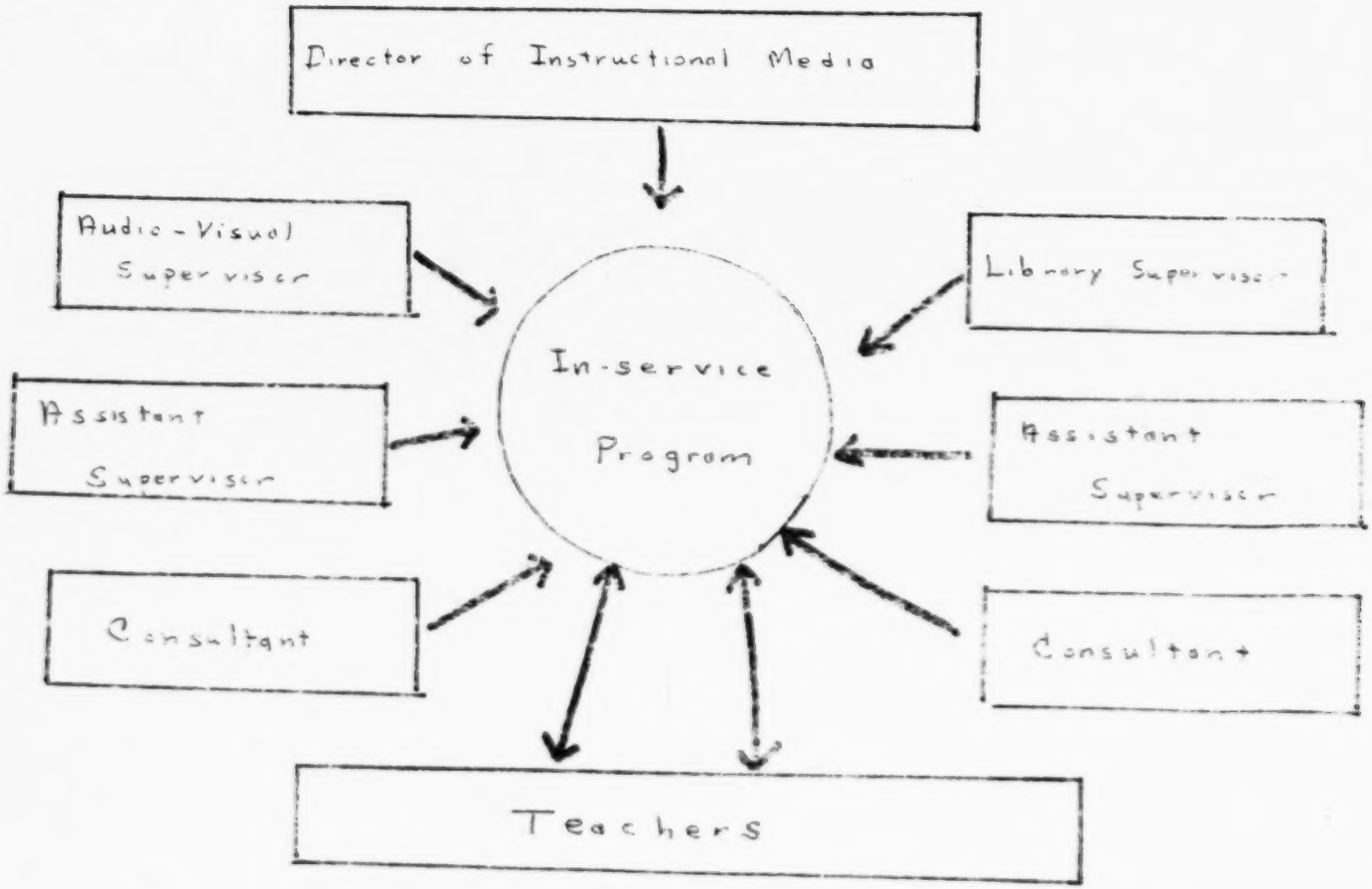
The chart on page 131 of this paper depicts the various contributions personnel are able to give to inservice programs.

There has been considerable improvement in teaching strategies due to the use of technological advances, yet much teaching is being conducted in the same manner as it was many years ago. It is, therefore, vital for those knowledgeable in the field of technological techniques and innovative materials to expose their colleagues to them. It must be said that a contented teacher should stop teaching.

Multi-media progress is aimed at helping teachers to become more familiar with new instructional and grouping patterns as well as new media, i.e.,

> Programmed learning - instruction through information given in small steps with each step requiring a correct response by the learner before proceeding to the next step.
>
> Dial Access System - a long range project to provide immediate and automatic access to a wide variety of audio-visual materials.
>
> Tape Cassettes may be used to tailor lessons to individual needs.

50. Edgar L. Morphet, David L. Jesser, Editors, Designing Education for the Future No. 7, New York: Citation Press: (1970), p. 96.



.51.

A representative organization showing how various personnel contribute to the inservice program

51. John I. Chalmers, Audio-visual Inservice Training, Audio-Visual Instruction (May, 1970) pp. 60-63.

Satellite T.V. - Alaska is in need of video-tape recorders in every school that can pick up programs by satellite and replay them needed. Teacher orientation to the use of TV and radio would be essential to this endeavor.

Cable TV has an educational significance in schools. Schools could develop programs that would be transmitted to homes over CATV cables.

Video-tape has already made a significant contribution to activities and programs related to professional growth and development through inservice training.

Computers - "The ever-increasing dependency of education upon the computer seems inevitable because it helps meet the needs of students for greater individualization of instruction and greater relevance of subject matter, and the growing expectation of society for a higher degree of accountability and efficiency in the school." 52.

Cooperation between the United States Office of Education and Virginia State College resulted in the implementation of a Media Institute. The Institute was attended by teachers, principals, supervisors, administrators, and college deans, all working with minority groups.

Emphasis of this Institute was on the development of programs, improving instruction, providing more individual attention, systemized teaching, team teaching, and media and library service. Activities were selected that would give participants meaningful experiences. Practical skills backed with learning theory guided individuals to the goal of relevant education.

52. Murray Fordow, Today's Education, NEA Journal, (November, 1970), p. 40.

Because teachers of Baltimore County did not understand how to use the variety of educational materials available to them, a Mobile Educational Technology Unit was inaugurated. Teacher training mobiles were built, equipped with the latest in audio-visual resources, and staffed by eight teachers skilled in their use.

The unit usually stayed at an elementary school for the space of one week, and at secondary schools for two weeks. Instruction was begun at a preliminary meeting where a resource teacher demonstrated how using equipment could revolutionize a lesson. During this time the resource teacher could ascertain teachers' knowledge and ability to use the media.

During the week of training each teacher was released from teaching duties for three fifty minute sessions with the staff demonstrating basic techniques of media operation. In addition to the time made available to teachers, they were free to use after school time for further investigation and help from the staff.

The mobile unit's presence at a school has changed many traditional modes on instruction. And, until the county can afford to staff each school with a media specialist, the Mobile Educational Technology units will continue.

In 1970 Kent State University began a TED (teacher education relating to the disadvantaged) program and included as one of its components instruction on the use of multi-media materials and equipment. This program included programmed instruction, student response systems,

closed circuit TV, and individualized exposure to a wide range of audio-visual media.

In Philadelphia, Pennsylvania, at the Russell Conwell Middle Magnet School there exists a highly unique student-teacher relationship among 150 students and five team teachers.

Students work on a flexible, individualized schedule. All pertinent information concerning each child is stored in the computer and is called a computerized student portrait.

Independent study is encouraged, and special learning packets in all subjects are available to the children. The learning lab is staffed by teacher aides.

Manipulative materials are abundant, and closed circuit TV is utilized. Students produce and perform on all programs as well as operate all of the equipment. In the school is an Instructional Materials Center where materials can either be used in the study carrels, or checked out for home or classroom use.

Success of this program might be attributed, in part, to the inservice education of the teachers. Conducted within the school, by Temple University Educational Department, the inservice program is one of meaningful involvement, especially in the use of instructional technology. Another reason for the success of this highly innovative program is the involvement and cooperation existing among teachers, teacher aides, and principal.

Technological advances have done much to update and vitalize education. Certain innovations in inservice teacher training have been developed around or because of technological advances. We read in Teacher Education in Transition,

> The 1980's will be the offspring of the marriage between the new research and ideas of learning and the new technology. "Innovations" in learning theory and "multi-media" began first to date each other in piecemeal experiments here and there during the 60's, and even, in some places, to go steady. It was not until late in the decade, however, that the experts perceived that modern research and modern technology must be wedded completely, if a radical re-design of teacher education were ever to emerge. 53.

Micro-teaching involves the teacher to teacher intern practicing one or more skills in a scaled down lesson for approximately ten or fifteen minutes and involving five or ten pupils. Generally, the lesson is video-taped and critiqued, retaught and critiqued a second time. Some school districts use micro-teaching to help teachers emphasize certain behaviors necessary for quality instruction. The micro-teaching clinic has proven to be an effective means in developing the ability to ask provocative, answerable, and appropriate questions. There has been noticeable development and improvement of teaching skills through this form of self-evaluation. It has been effectively used for modeling specific behaviors when new methodologies have been review and practiced. It enables teachers to practice a variety of possible alternatives. Micro-teaching can be used as

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53. Staff, Teacher Education in Transition, Maryland: Multi-State Education Project (1969) p. 293.

a diagnostic, training, and evaluative clinical experience for teachers, thereby producing a more effective and individualized in-service program.

In the use of micro-teaching for enhancing in-service education, James Olivero says:

> If American education is ever to reach the national goals and objectives of finding a rightful place in society for each of our citizens, there are bigger and more important questions and problems to be answered than helping a teacher respond to a given situation in school. Much of our energies must be devoted toward the development of human relations. Indeed, there is possibly nothing more important at this point than insuring man's understanding of himself and man's understanding of his fellow man. Unfortunately, we do not know all the answers, but we do believe that by using the potential of micro-teaching to improve the technical skills of teachers and, in some cases, of students, we will be able, to at least hold our own so that we can devote even more of our energies toward solving the myriad and complex problems of man's relation to man. 54.

A program to demonstrate the effect of micro-teaching on the instructional behavior of rural school teachers was held in Georgia. It involved fifty-one teachers and 1,114 pupils. Teachers were pre-rated by a five member team using the Stanford Teacher Competency Appraisal Guide. Self-evaluation of teachers was realized by video-taped performance and the Minnesota Teacher Attitude Inventory.

54. James L. Olivero, Micro-Teaching: Medium for Improving Instruction, Ohio: Charles E. Merrill (1970), p. 61.

In recognizing the need for this program, John Codwell tells us:

> For rural school systems, the utilization of some appropriate form of micro-teaching using video-tape may be at least a partial solution to the problems these school districts experience in their efforts to improve teaching performance because of geographic isolation, limited funds, lack of adequate instructional supervisory personnel, and, at times, poorly qualified teachers. For if rural school teachers can be motivated through a micro-teaching experience or some adaptation of it, the terrific salary burden imposed on a rural school system in the employment of instructional supervisory personnel to aid teachers in professional growth can be eliminated. 55.

Jefferson County, Colorado School System teachers, working in teams or individually, constructed micro-teaching lessons to their own specifications. They decided the skills needed to work on, the length of the lesson, and the number and grade levels of the pupils. By doing this they were able to work on teaching problems they themselves had identified.

Since 1965 the Orange County California School District has explored various methods of teacher inservice programs involving video-equipment. Results showed that video-tape did assist teachers in modifying classroom behavior, and did increase student achievement.

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55. John E. Codwell, A Demonstration of the Effect of an Adaption of Micro-Teaching on the Educational Behavior of Rural School Teachers, Washington, D. C.: Dept. HEW (October, 1969), p. VIII.

In view of these facts it appears that State Departments of Education should strive to support, spread, and transfer the effective aspects of this program to all public schools.

Protocol materials are reproductions; visual, auditory, or printed, of behavior that portrays concepts in teaching and learning. These enable the experienced teacher to study behavior that is educationally significant, and facilitate the development of their interpretative competencies.

Simulation techniques consist in portraying on video-tape common classroom problems encountered by teachers, and illustrating ways of handling problem situations.

In 1965 the University of Wisconsin in Madison began to offer continuing education courses over the Educational Telephone Network. In 1967, the English Department began an Educational Telephone Network Workshop for English Teachers.

Programs originate in a small studio on campus, and are received at listening stations equipped with a loudspeaker and a telephone. To speak, a person need only lift the telephone and all participants can simultaneously hear remarks made by anyone around the state. The party line is state wide with telephone stations in hospitals, clinics, courthouses, and on fifteen University of Wisconsin campuses.

The English workshop provided an opportunity for

junior and senior high school teachers to shape a program to fill their own needs. About eighty teachers became involved in this program.

Teachers felt much was gained by the use of this two-way medium which promoted the free exchange of ideas and reactions to these ideas.

L. O. Andrews, in his article Challenges and Needed Developments, tells us:

> ...it may be appropriate to indicate that many of the new media for refined procedures may in the long pull prove to be more effective and more commonly used at the inservice than at the preservice level. For example, micro-teaching, critical incident films, simulation, minicourses, the multi-media study carrel, the mirror image of the video-tape recorder, the use of models and even of recorded episodes all would provide new and improved ways for the experienced teacher to objectify teaching processes and problems away from himself. This equipment gives a ready approach to the teacher who wants to study ways to improve any one of a myriad of specific behaviors and procedures. 56.

56. L.O. Andrews, Teacher Education in Transition, Challenges and Needed Developments, Maryland: Multi-State Education Project (1969) p. 173.

F. CHANGING ROLES OF TEACHERS

Rapid changes in media, materials, curricula, and the role of the teacher make inservice education of the most crucial problems facing educators today. In order to make effective use of the advances in educational technology and new insights in learning, new roles for teachers need to be established.

The Teacher Education Center Concept gives a unifying approach to the study of teaching and supervision. It is designed to benefit preservice professionals as well as to assist inservice performance. These programs are based on the concept of teacher involvement. The speed with which TEC are able to respond to member requests enables them to do a better job than most colleges and universitites in keeping teachers and administrators abreast of current trends. There is no time lag between innovative action or research and communication of this progress to school personnel. Entire kits with audio-taped programs, typed scripts, and teacher's guides are sent to member schools ready for immediate use in both teacher and student education.

It can be said that the Teacher Education Center, while strengthening inservice programs, is the means and place where individuals or teams can study formal and informal teaching and learning techniques, and can thereby become better and more effective teachers, as well as better and more effective teachers of teachers.

Differentiated Staffing, a relatively new innovation, seeks to make better use of educational

personnel. Shortage of trained nurses could be alleviated by distributing the teacher's work into activities which require varying degrees of understanding and skill. A master teacher is given a high level of responsibility in planning and directing the education of a large number of pupils. While he does not, and should not, lose contact with students, he is supplied with a staff of assistants. Teacher aides, beginning teachers, and career teachers help him in the planning and implementation of programs.

Differentiated teaching also makes use of pupil tutors, who later may become teacher aides. B. Othaniel Smith explains:

> Thus, the point of entry into the field of teaching can be at the level of pupil tutor, teacher clerk, teacher aide, assistant teacher, associate teacher, depending upon the individual's maturity, training, and experience. But no matter where the individual enters, the only restriction upon his advancement should be his aspiration and his willingness and capacity for work and study. Teaching should not be like some social service occupations where prior experience and training, even in related areas, count for nothing toward preparation for a higher position. No job in the field of teaching should be a dead end; no one need start all over again to advance. 57.

Because of the wide range of professional materials and social attitudes, teachers need to be assigned according to disposition. It has been proven

57. B. Othaniel Smith, Teachers for the Real World, Washington, D. C.: The American Association of Colleges for Teacher Education (1969), p. 34.

that differences in individual maturity can be directly related to student achievement. There is a need to establish structures in schools that will allow levels and kinds of professional talent to be recognized. When this individual professionalism is recognized, teachers will emerge, become more active in school organization, participate in determining school structures, and

> ...The senior professional will be in a position to impart his knowledge and skills to the professional novice, the professionally ignorant, and the professionally inept via inservice training. Inservice training could then begin to free itself from two great fictions which guide its current practices: (a) that graduation from a teacher training institution bestows lifetime professional competence; (b) that initial training inadequacies will have a lifetime of professional consequences. 58.

Differentiated staffing, then could provide opportunities to design inservice plans which master teachers or senior teachers could provide.

By 1980, it is expected that the idea of a teacher as a lone operator will be outdated, instead, he will be a skilled member of an instructional team. This team, then, may be outlined as:

I. Instructional Specialist - the training team leader
   A. Professional Teacher
   B. Resident
   C. Intern

58. Dwight W. Allen, Needed: A New Professionalism in Education, Washington, D. C.: American Association of Colleges (May, 1968), p. 3.

3. Student Teachers
4. Assistant Teachers
5. Paraprofessionals
   1. Teacher Aides
   2. Technical Aides
   3. Clerical Aides

In an effort to train twenty exceptional teachers for leadership roles an inservice program was held in California. This program was geared to peer dynamics, self-evaluation, video-tape techniques, individualized instruction, the problem solving approach, dialogue, demonstration, and interaction. The outcome of this program was a rise in new teaching methods, and the establishment of a teacher-sharing program. Participants from this program were responsible for inservice training in their respective schools with a minimum of two days per month for professionalism. This program proved that a group of specially trained teachers can successfully engage an entire staff in a professional development program. A year, however, was inadequate; a second year was needed to reenforce and firmly establish innovative aspects, and a third year would hopefully achieve the desired impact on project schools.

Team Teaching

Inservice teacher education can be more effective if planned by multigrade planning-teaching teams. This team concept is based on the assumption that the teacher must know his students, and have some degree of specialization in subject areas. Each multigrade team is responsible for guiding three class-sized groups of

students in consecutive grades for a three year sequence. At regular meetings of team members, each member is expected to provide leadership in a specific subject. Thus, there is a sharing of information on current research and practice. Automatic, continuing inservice education occurs through this type of information exchange.

In Concordia Teacher's College, River Forest, Illinois, cooperating teachers are the key figures in teacher education programs. The education department pursues a vigorous program of orientation and inservice program for cooperating teachers. A leave of absence program is provided to enable cooperative teachers to join the college staff. A series of orientation and training meetings are conducted during the academic year. A week long summer institute on Supervision of Student Teachers is made available to about twenty cooperating teachers yearly.

Teachers as Change Agents

It is important for teachers, fresh from innovative programs, to be instrumental agents in implementing these practices in their schools. It has often occured that the initiative of these resource people has been frustrated by authoritarian principals who are afraid of the risk taking effect of change.

To make his desire for change known, the teacher must speak out, but, at the same time, be willing to accept the responsibility of his actions.

The teacher's classroom should be the target

for initial implementation of change. A careful explanation of the proposed program could then be given to other staff members. All the information needed to carry out the program should be included in the explanation.

Creative teachers, desiring to act as change agents, must remember that

> Mastery of one's own professional destiny is not without its price. Willingness to do required work, exposure to accountability for one's actions, courage to speak up, academic diligence and honesty, and premediated application of the science of persuasion are some of the costs to the teacher who wants to be a change agent. All things do not come to him who sits and waits. 59.

G. Performance-based Teacher Certification

Mere accumulation of credits and time spent in the teaching field can no longer be the sole requisites for certification. Too many times courses taken are not relevant to what the teacher is actually teaching. Certification has been too much related to teacher preparation, and has not placed enough emphasis on the ability to bring about learning. Another basis for the need of performance-based creditation is the public clamour for evidence of teaching performance.

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59. Charles M. Hill, Teachers as Change Agents, The Clearing House, Vol. 45, No. 7 (March, 1971) p.427.

Teacher certification has usually been based on transcripts of specific college courses and the obtaining of appropriate degrees. Performance based certification requires evidence of a candidate's ability to perform as a teacher.

Performance requirements do not specify setting of conditions under which a specific competency must be learned. In the program approach, which has been accepted in Florida, the teacher education institution proposes a program, and submits it to the Department of Education for approval. After approval of the program, all candidates who successfully complete it are granted a certificate.

The Board of Governors for the Florida Educational Research and Development Program presented this objective to the Florida Comaission of Education:

> By the end of 1974 competencies expected of teaching personnel in elementary and secondary schools will be clearly identified. Evidence will be available showing relationships between teacher competencies and pupil learning. Teacher training techniques will be available for use in preservice and inservice teacher education programs which are aimed at the specified competencies. Evidence will be available to state policy makers which shows the extent to which teacher effects on pupil learning support various credentialing requirements. 60.

By adapting a performance based approach to teacher certification, the credibility of certification would be enhanced and the teaching profession strengthened.

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60. Paper - Orientation Meeting of the Triple-C Project, Board of Regents, June 25, 1971.

IV. EVALUATION

The rapid and dramatic change of educational needs has surpassed the capabilities of any single institute responsible for preservice and inservice teacher education. Even though thousands of dedicated persons have labored diligently to improve effective teacher performance, the lack of competent teachers in every classroom indicates the need for continued and more meaningful inservice programs. It might be said that our greatest failure as a profession lies in unexamined alternatives and unasked questions.

Newer models of teacher education have been discussed. A partnership between college or university and the school system is essential. More dialogue between classroom teachers and teacher educators is essential for implementation of innovative programs. Together, professors and interns must learn to plan instructional modules geared toward achieving specific competencies. It is essential that public school personnel be given an ever-increasing role in teacher education. Universities and colleges are responsible for teacher learning necessary for effective performance. Schools provide the experiential framework, and the teacher represents the heart of the teaching program. It has been stated that:

> The possibilities for professionalism in education are as infinite as our tenacity and boldness in facing the educational problems of all students as individuals. We in the profession must break the stereotypes, for we have created them, and we have been blinded by them. [61]

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61. Dwight W. Allen, Needed: A New Professionalism in Education, Washington, D. C.: American Association of Colleges for Teacher Education (May, 1968).

Throughout their careers, teachers need continuous relevant growth experiences. Preservice and inservice education must become part of the same continuum. Professional growth must be the criterion of all training experience.

There is a need to convince teachers that continuous training must be a part of their career. When teachers recognize the value of continuous training, many excellent teachers will become even more effective. Inservice programs need to be restructured to provide for continuous, measurable growth relevant to the teacher's job performance.

For more effective programs, teachers must be involved in the planning and implementation of them. Studies have shown that inservice education programs planned and conducted by teachers are better received. Teachers are more receptive to educational change and new ideas when they originate through an educational group they control, and are organized around problems actually faced by them.

Rita Dunn had this to say about faculty involvement:

> When creativity is capitalized on, and craftsmanship properly used, accompanied by the talents of experienced consultants, an involved faculty remains so and provides inservice programs with the final ingredient necessary for success - continuity. 62.

62. Rita S. Dunn, Process Dynamics for Teacher Involvement in Inservice Programs, Audio-visual Instruction, (May, 1970), pp. 92-94.

Individualizing inservice education may be just as important as individualized instruction for children. Flowing from the particular needs of teachers, inservice education must offer current information on research, provide an intellectual atmosphere, and throw full light on any problem of immediate concern to teachers. The school system must assume its responsibility in providing inservice programs.

Strengths and values of inservice programs will be seen as classroom improvement becomes evident. It is the student alone who can evaluate the extent to which his education satisfies the need for personal development.

In all inservice programs it was noted that without administrative support, implementation of any program was almost impossible. Teachers were more appreciative of programs given in the summer, or on a released time basis. After school programs, in most instances, had little effect for positive growth, for the teachers were too tired to actively participate in them.

Inservice programs involving active participation of participants, laboratory and field experiences, and working with children seemed to be most favored by teachers.

The optimal growth and development for each and every child is the final evaluation of any inservice program. When a teacher can say, the more I do, the more I want to do, then he has discovered that teaching is exciting.

Continuous growth of teachers will result in assured renewal of schools, fewer inadequately prepared teachers, fewer drop-outs because of lack of help and "know-how", fewer capable persons leaving the profession, and consistent training in methodology. It would be extremely wasteful to ignore the needs of experienced teachers for continued educational growth. It is by this continuity that teachers will be able to satisfy their professional needs more completely.

In conclusion, the writer agrees that,

> If teacher education is reorganized so that continuous relevant growth experiences are provided for teachers throughout their careers, then pre-service education and inservice education will become part of the same continuum. ... We must, in the process of specified teaching performance criteria, set out our priorities in such a way that credentialing procedure becomes a formality and professional growth becomes the criterion of all training experience. Whatever criteria we settle on for preservice programs, and whatever training procedures we judge relevant at that level, must be applied and extended in our in-service programs. ... We must make some tentative decisions regarding what criteria a teacher should meet before reaching a credential, and what criteria should be met later as part of his inservice professional growth.[63]

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63. _____, Summary of a Proposed New Program for Elementary Teacher Education, Massachusetts University, Amherst, Washington, D. C.: Office of Education (October, 1963).

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